

**ONLY  
58P**



# COMPUTER EXPRESS

**BRITAIN'S BIGGEST SELLING COMPUTER WEEKLY**

## AMIGA

- Amazing astronomy
- Ultra Design pro CAD
- Typhoon Thompson

## ST

- June Atari show
- Mekon's laser
- Rainbow Islands

## PC

- Pirates jailed
- Optical card reader
- CBM Apricot bid?

## CPC

- Comic book capers

## BBC

- Sim City soon

**C64•PCW•XE  
SPECTRUM  
QL•ARC•MSX**

**SPECIALIST COLUMNS**



**THE GREATEST  
EVER GRAPHICS?**  
Does Space Ace really stack up?  
Turn to page 58 and find out...

# ATARI SPRINGS ST SURPRISE

**Express uncovers secret plans  
for three new bundles**

**All is revealed on page 3**

## THE PINT THAT GOES TO YOUR HEAD

Those weird Guinness records are coming to  
your computer. Pure genius?

- see page 54



## MODEMS, PRINTERS & PORTABLES

Read Shopping Express for 28 pages of Britain's best computer bargains





# CONTENTS

## FEATURES

### IT'S A RECORD 54

...Well, a CD actually. The book of human silliness from the brewers of law suits is now on computer

### SMARTER THAN YOU THINK 57

The credit card in your pocket could soon out-process your Amiga!

### ACE IN SPACE 58

Games from Laserdisc raise the quality of 16-bit graphics

## REGULARS

### NEWS 2

### COMMENT 8

### BUYER'S GUIDE: MODEMS, PORTABLES & PRINTERS 23

Hardware buying advice from the experts

### READERS' CLASSIFIED ADS 32

Hundreds of second-hand bargains

### EXPRESS SALES 36

The place to shop for the best for less

### JOBS 42

Need a new job? Look no further...

### PC GUIDE: SHIFTING YOUR DATA 49

Our inside-the-PC series tells you how to move your data to your new PC from your old machine

### TECH TIPS 61

The manual from Uncle

### LETTERS 65

Have your say in the computing world's top debating chamber

## YOUR MACHINE

### PC compatibles 10

### Atari ST 12

### Commodore Amiga 14

### Sinclair Spectrum 16

### MSX-compatibles 16

### Amstrad PCW 16

### Amstrad CPC 17

### Commodore 64 17

### Sinclair QL 18

### Atari XE series 18

### BBC B and Master 18

### Acorn Archimedes 18

## SOFTWARE PIRATES GET JAIL SENTENCES

Two men are currently whiling away four months in one of Her Majesty's prisons - for copying software.

Francis Johnson and Christopher Swallow pleaded guilty to charges of criminal deception and breach of copyright at Staffordshire Crown Court, and were sentenced to four months imprisonment each for illicit copying of computer software.

The men had been trading under the name Alpha Omega Business Systems, which was supplying copies of programs from such companies as Systems Union, MicroFocus and WordStar International.

Acting on information supplied by Systems Union, the Federation Against Software Theft and Staffordshire Police Fraud Squad swooped on Alpha's offices.

They found what they described as an Aladdin's Cave of illegal software.

Systems Union marketing director Herman Bruce warned others of the perils of computer software piracy. He stated: "I hope that the stiff sentences imposed on the offenders will serve to highlight the serious nature of the offence and help stamp out piracy."

## American professor predicts end to virus chaos

# VIRUS SHIELDS WILL PROTECT COMPUTERS

All computers in the near future will come with built-in virus shields, ending years of troubles wreaked by the rogue programs.

That's the prediction of Professor Lance Hoffman, head of computer science at the George Washington University of Washington DC. He says the virus problem will become so ferocious over the next few years that users will demand protection at all levels.

"By the end of the decade we're going to see an increase in the number of viruses and a change for the worse in their nature," he told Express. "I can see another Chernobyl, triggered by a com-

puter virus, just waiting to happen.

"It all depends on the way things go, but virus shields will be in place by the end of the decade."

He predicted that the shields would be designed so that even the most ingenious types of viruses and Trojan horses would be foiled.

Despite apocalyptic predictions, he has also warned against getting the virus threat out of proportion. "We should keep them in perspective. Just as the killing of innocent hostages by terrorists has more psychological impact than the same number of deaths on the highway, someone with a disk trashed by a virus may be

more irate than someone who loses eight hours work because of an electrical failure."

Meanwhile, according to on-line news agency Newsbytes, a computer virus which urges the legalisation of marijuana has appeared on governmental computers in Canada.

The virus appeared on 34 PCs at the Canadian House of Commons. Without any apparent trigger the message: "Your computer is now stoned. Legalise marijuana" appeared on monitors. The virus itself does not appear to be harmful, although it is difficult to wipe it off the system.



• Space Ace: more superb laser graphics from Bluth to come

## Dragon's Lair sequel due this year

A new version of the hit interactive cartoon *Dragon's Lair* is to be launched later this year.

*Dragon's Lair II* will once again squeeze amazing graphics from the ST and Amiga, but there are also PC and Macintosh versions in production. *DLII* has been produced by Don Bluth and Readysoft in Canada, also responsible for the highly-acclaimed *Space Ace*.

The first *Dragon's Lair* began life as a Laserdisc arcade game six years ago -

way ahead of its time. The images from that disk were digitised and transferred to magnetic media.

The second game will be released this autumn and it is understood that an arcade version of the game is to be launched by Nintendo which holds the rights. In the meantime, interactive cartooners will just have to sit tight until the new adventure arrives.

• Bluth's methods are analysed on page 58.



• Bros: celebrating a high score on Super Mario Brothers.

## Name game

Some pretty wonderful people are getting into the joys of gaming. According to Nintendo, its list of 63 trillion squillion subscribers includes teen popsters Bros.

Apparently Matt and Luke aren't the only famous bods who enjoy a good blast. Others include Michael J Fox, Don Johnson, Henry 'The Fonz' Winkler, Bruce Willis, Matthew Broderick, Whoopi Goldberg and Goldie Hawn.

One fascinating inclusion in this veritable hall of fame is Robin Givens - ex-love of erstwhile boxing champ Mike Tyson. Could she be giving Mikey a pseudo bashing in hit game *Mike Tyson's Punch Out*?



'Discovery' ST at £299 • STE at £399 • 1040STE bundle at £499

# ST PACKS REVAMPED FOR SPRING OFFENSIVE

AN EXPRESS  
**EXCLUSIVE**

Details of Atari's secret plans for the ST's immediate future have been uncovered by *Express*.

Within the next fortnight the firm will announce a new initiative designed to make the ST "the best entry-level option on the market". The firm is to sell its STFM machine for £299, with an attractive bundle incorporating not just games but also more useful packages to "really get the first-time user started". Like a previous entry-level ST bundle, it will be called the Discovery Pack.

An intriguing approach is also to be taken with the new STE. That will cost buyers a £100 premium, retailing at £399. Purchasers of the 'Amiga beating' STE will not be offered the extra goodies which make the entry-level option so attractive.

However, for £499 upgraders will be offered a 1040STE along with up to £400 worth of Kuma professional software, making it a complete system for serious users.

Current bundles allow ST buyers to choose between a bare system for £299 or the successful Powerpack for £399, with no difference in treatment between the STFM and the STE.

Insiders at Atari say anyone who has already bought an STE – either with or without the extras – can "count themselves lucky". The firm says that, despite initial incompatibility problems with leading software packages, the upgrade is now fully operational.

The Discovery Pack will come with five games – there's also a paperback book called *Discover Your ST* which will



• ST: new approach to bargain bundles.

help inexperienced computer users get to grips with the new machine. A disk-based tutorial is also included.

However, added to this are a number of extra packages, the nature of which is a closely guarded secret within Atari Towers. The company is anxious that news of the new pack should not damage sales of those machines currently in retail and distribution channels.

Atari had hoped that this new plan would herald the arrival of the STE. However, a dock strike at Folkestone before Christmas and general shortages of STs meant the firm had to fly 20,000 STEs into the country to satisfy demand.

Therefore, buyers had a 50:50 chance of receiving an old STFM or the new STE. The advantages of the newer machine's technical specifications now appear to outweigh the disadvantages of

incompatibility problems, experienced by 'premature' STE owners.

Clearly, Atari is hoping to steer serious buyers toward the value-added £499 pack. For an extra £100 STE buyers are being offered a bargain in terms of the extra software and memory.

Reluctantly commenting on the leak, UK managing director Bob Gleadow told *Express*: "What we want to do is position the 520ST as a first-time buyer's machine. We're trying to separate first- and second-time buyers with an attractive £299 package and another at £499 where we'll be looking to sell the 1040."

He said he believed the new ST package would be better value than even lower priced 8-bit machines. ■

• In next week's *Express* there is an exclusive interview with Atari UK's Bob Gleadow.

## Atari shows its stuff

Atari is to stage its own show based around the company's full line up of products – from the Lynx hand-held games machine to the ATW transputer.

The event is to be held at the Hammersmith Novotel in the first weekend of June. It's the first time Atari has organised the show since Database Exhibitions scrapped its Atari Show late last year.

Atari is hoping to offer enthusiasts not only the chance to pick up bargains from the usual box shifters but also an opportunity to see the firm's plans in full.

It will be based on two floors. Visitors upstairs will be offered the chance to enter an 'Atari workshop' where various hardware technical boffins and software developers will be on hand to "help you get the most out of your machine".

There will also be a DTP section – an area to which Atari is attaching much importance. There's also a chance to fiddle around with prospective purchases such as the Portfolio and Lynx or simply look at more expensive articles like the TT and ATW transputer. Atari-related software and hardware bargains will be situated downstairs.

Entry is a respectable £2 per person or £4 for a ticket covering families of up to four members. ■

## Pop video fun for the Bitmap Brothers



Computer graphic experts The Bitmap Brothers have been sought out by pop band Oh Well to add some pretty colours to a new promotional video.

The video for new song *Radar Love* features Amiga-generated graphics overlaid on real footage. Director James Le Bon often uses such effects on his work – this time though he decided it was time to opt for computer graphics rather than hand-drawn overlays.

The Bitmaps used an Amiga with extended memory and an accelerator board to generate on-screen ripple effects. Computer graphics are to feature more and more in pop videos, mainly because of the relatively low cost of such productions. ■

• Left: *Radar Love* gets Amiga-aided graphics.

## Best seller

New Computer *Express* has been confirmed as Britain's biggest selling computer weekly.

Official sales figures from audit body ABC put average weekly sales at 22,277 for the period July to December 1989. That's more than 50 per cent higher than any magazine operating within the same market. *Express* sales this year are already running at several thousand above the ABC figure.

Many thanks to all our readers. ■

## Cracking crackdown

The anti-piracy group FAST is to announce a new set of measures aimed at combating software theft.

Details of the schemes, which are intended to help catch thieves, will be announced this week. It is expected that they will be based on projects which have been developed in the US and Canada. ■



## Aussies pick Which

Ten Australian companies will be setting up a special series of stands at the forthcoming Which Computer? Show exhibiting a series of products not seen before in the UK.

The firms are bringing hardware and software solutions up from Oz where they've already been successful. They're hoping that their goodies will generate enough interest to warrant UK launches and distribution deals.

One product from Datapac International is a multi-user operating system for PCs allowing up to 23 people to operate from a single PC.

There's also a personnel management solution from Frontier software which allows companies to extract, sort and file information about employees.

Add to that an anti-hacking device, a board which turns a 286 into a 386, and a series of voice-mail products and you have an intriguing selection. It's been organised in conjunction with the Australian Trade Commission.

The Which Computer? Show will be held at the National Exhibition Centre in Birmingham in April.

## New chip aids micro movies

On-screen multimedia images will soon be greatly improved following the release of a new chip which can compress images by a factor of 200, writes Jerry Glenwright.

Until now, the use of high quality still and motion pictures in computer applications was severely restricted due to the heavy demands on memory, and the processor time needed to store and manipulate them. Today's compression algorithms use 800Mb of hard drive space to store just 20 minutes of motion pictures from video tape.

However C-Cube Microsystems, an American consumer electronics company, has perfected a VLSI (very-large-scale integration) chip which reduces each colour image to half a percent of its former size, enabling far more frames to be stored and viewed.

The CL550, as the new chip is known, is the first to implement the joint Photographic Experts Group standard for image compression, in an attempt to create one standard that can be used throughout the image processing industry. "We believe the JPEG international standard for image compression, and the CL550 will open vast opportunities in the multimedia marketplace" said C-Cube's president Edmund Sun.

Desktop computers equipped with a CL550 will be able to store, edit and transmit entire photographic-quality movies over local area computer networks, greatly improving the computer's primary role of providing information.

The CL550 will be widely available by June, with a bulk-deal price tag of \$155. Contact C-Cube on 0101 408 944 6300 for further information.

## Sensational \$35 million bid for UK computer firm

# COMMODORE TO BUY APRICOT HARDWARE?

Commodore is believed have put in a bid for the hardware business of veteran UK firm Apricot.

Apricot is understood to be considering bids from up to a dozen prospective buyers, including Epson and Acer. However an American company, believed to be Commodore, has pitched in with a reported bid of \$35 million.

According to influential trade magazine *MicroScope*, that bid is likely to be successful, giving the buyer a large chunk of one of the UK's most famous computer companies.

A decision will probably be taken within a month - the end of Apricot's financial year. If Commodore does buy the hardware business then it will have access to a wide range of middle to high-end PC products, as well as the famous brand name.

The firm would also have access to top-end business currently enjoyed by Apricot and access to contacts in the public and corporate sectors, both of which have long been eyed enviously by Commodore in the UK. There would also

be UK manufacturing facilities. All this could be slotted in to the new Systems Division.

However, neither firm is prepared to comment on the matter at this sensitive time. Commodore UK managing director Steve Franklin has given a firm "no comment" on the matter and has refused to either confirm or deny any possibility that Commodore has put in a bid.

However, he told *MicroScope* that the firm did intend to introduce EISA and MCA standard machines in the near future - an area in which Apricot has already dabbled.

On Commodore's ambition at the top end of the computer market Franklin said: "Admittedly we have only about 0.1 per cent of the corporate market in the UK, and we need to get to 5-8 per cent to become a serious player. We have plans to do just that."

Apricot's communications director Jes Dorrell was also unwilling to give details, restricting himself to a confirmation that the firm is in negotiations with "a number of parties".



• Franklin: ambitious

If Commodore does buy Apricot's hardware division it will be the most important purchase since Amstrad bought the Sinclair name.



• Colorado: beat the baddies and get them there beavers.

## Trapping the games player

French software company Silmarils has hit the UK with a new adventure game called *Colorado*.

It traces the wanderings of a trapper in the 19th Century who is stuck out in the wilds with quite a lot of baddies to contend with.

There's lots of canoeing and shoot-

ing and other such activities, as well as a few logic problems to solve.

It's the first game to come out of a distribution deal between Silmarils and UK firm Palace.

*Colorado* is out next month, with versions for the ST, Amiga and PC costing £24.99.

## Channelmark's Power change

Channelmark UK - the firm behind the low-cost business accessory software range *Power-Up* - has changed its name.

Not entirely surprisingly the company is now to be called... *Power-Up*. "Everyone calls us *Power-Up* so why keep swimming against the tide?" said sales director Graham Lomax. "Basically it gives us more mileage out of the *Power-Up* brand name and eradicates any confusion."

*Power-Up* sells thousands of useful little PC programs which do anything from printing out labels to aiding the design of forms. For a catalogue call 0276 65272.

## Four-pack out

A new games compilation is launched this week featuring some of the best games from lesser-known publishers.

*Hyperaction* from Impressions features Logotron's highly-acclaimed *Defender* game *StarRay*, *Hellbent* from Novagen, *Ringside*, a boxing game from German firm EAS, and Impressions' own *Raider*.

The pack costs £24.99 on the Amiga; the ST version features *Brickbusta* instead of *Raider*.



## Second-hand season

Bargain hunters in the US can look forward to a bumper crop of second-hand goodies following the spectacular crash of junk bond company Drexel Burnham Lambert.

The company is to sell off \$140 million worth of hardware and software. But most of the buyers will be in the financial market.

Amazingly, the firm wants to sell it all off as packages - hardware and software complete with human operator. Some 500 computer staff have to be relocated. ■

## Sumo like it hot

Aaaaiiee! It's time to get grappling and grunting on your computer. Martial arts are back.

MicroProse is to launch a four-pack of fighting titles incorporating sumo wrestling, kung fu, kendo and freestyle. Gamers will have to battle their way through various rounds until they reach Master status.

One interesting feature is the ability to decide which moves correlate to various joystick movements. You can pre-program up to four moves for each joystick movement. Oriental Games will be launched on all major formats in April. ■



• Lynx: enhanced versions

## Lynx 2 coming

Atari is already working on enhanced models of its Lynx handheld games machines.

Blueprints for the new models have been drawn up, but the plans are at an early stage. The Lynx 2s won't be introduced for another two years although Atari promises they will be worth the wait. ■

## Euro Word

If you're one of those people who don't know their 'bonjours' from their 'auf wiedersehens' then maybe it's time to invest in some foreign language dictionaries.

Luckily, word processing giant WordStar has just launched four such items for the PC. They are available in the four main European languages - French, German, Spanish and Italian and cost £49 each (or £99 for the lot).

The dictionaries can be used to check for embarrassing spelling errors and work with any version of WordStar itself. Call 01-643 8866. Ciao... ■

## MORE HONG KONG PIRATES SCUPPERED

The authorities in Hong Kong appear to be winning a battle against software pirates.

Last week customs officials seized illegal software and manuals with a theoretical value of nearly £1 million. In various raids nine people have been arrested.

One was a 38-year-old man who had been running an international mail-order operation with customers in New Zealand and the US.

And police arrested seven more people working out of a shopping arcade infamous for its trade in illegal products of 'a varying nature'.

Late last year anti-piracy cops busted one of the colony's biggest piracy operations.

The man the police arrested was said to have been personally controlling nearly 70 per cent of Hong Kong's thriving software piracy business. ■

Computer files label people as criminals in error

# DATA PROTECTION: KNOW YOUR RIGHTS

The Computer Data Registrar, Eric Howe, has launched a new leaflet designed to let you know your rights when it comes to computer data.

Howe says that despite the efforts of the Registry there are still many anomalies on official computer systems. Cases of people being labelled as criminals on computer records have been reported, as well as disturbing incidents of confused medical records which list perfectly healthy people as suffering from various maladies.

"The growing number of cases with

which we have been dealing show that, for instance, you can get wrongly labelled with a criminal record or be unfairly listed as a bad credit risk - the list goes on and on," said Howe. "It can result in serious consequences for the people concerned."

"One of the reasons why the Data Protection Act was introduced was to help resolve some of these problems, but there are still too many people who only have a vague idea of their rights, what we can do to help them and what they can do to help themselves. The new

leaflet is designed to provide guidance on these questions."

The Registry now receives about 60 complaints every week - twice the number of a year ago. The registrar hopes that the leaflet will prompt more people to take action.

The leaflet is called *If There's a Mistake on a Computer About You*. If you want to know where you stand, get one free from: The Office of Data Protection Registrar, Springfield House, Water Lane, Wilmslow, Cheshire SK9 5AX or call 0625 535777. ■

## MORE GLOBAL DOMINATION



The author of the award-winning world global politics game *Balance of Power* has just finished the sequel - *Guns and Butter*.

Chris Crawford has come up with a more economics-based simulation for the follow-up game. Set on an imaginary continent, it features a small country with ambitions to global empire. You must first build up the economy of your country, then put it on a war footing, producing the guns of the title.

The game uses an easy-to-control user interface to enable you to make your decisions and forge alliances with neighbouring despots. Graphs showing production levels can be altered to control the factories, and armies are placed with the mouse.

The game features thousands of variables, and there are more than a billion different continents to conquer.

Combined with the game's three difficulty levels, there should be many hours of play in the scenario.

The game's publisher even claims it has some educational value, teaching the player the "implications of modern macroeconomic and geopolitical theories".

That aside, *Guns and Butter* will be distributed in this country by Mindscape International. Versions will be available for IBM PC and Apple Macintosh in March, priced at £29.99 and £34.99 respectively. No plans have yet been made for other computers. ■

## Virus protection for troubled Mac

If you're fortunate enough to own an Apple Macintosh you will have noticed the amount of public domain and 'home made' software floating around.

One side effect of this is an unhealthy number of viruses on the loose for that machine. There are dozens of them, some of which simply slow the machine down, some with 'amusing' messages, and some which really do damage.

Microcom Software has just launched a virus detection and prevention package for the Mac called *Virex*. It's been put together to combat new strains of the nastier viruses currently sweeping across Europe from the US.

"The latest strains of virus have shocked a lot of people who claimed that their product would be able to detect any new virus without being updated," commented Microcom Software managing director Barry Marshall-Johnson. "We've been extremely aggressive about dealing with new viruses and we want to emphasize the importance of offering rapid updates to cope with any new or unconventional viruses that are certain to appear."

*Virex* costs £59. Call Microcom on 0483 740763. ■



Jerry Glenwright reviews the alternative book on hacking

# HOW THE GOOD GUYS BEAT THE COMPUTER CRIMINALS

In the beginning there was the *Hacker's Handbook*, a controversial little tome detailing the decidedly shadowy underworld of computer hacking – breaking into and manipulating computers owned by the military, government, educational establishments and the like. Thrilling stuff for those who like their computing raunchy.

Now it's the turn of the opposition with Clifford Stoll's *The Cuckoo's Egg*, a factual account of the electronic detective's adventures tracking hackers around the globe.

Stoll first came to prominence during February 1989 after he successfully located and prosecuted several West German hackers who had used a Berkeley research laboratory's Unix computer as a gateway into American military and government networks.

As system manager of the Berkeley

machine, Stoll began to notice shortfalls in the on-line accounting. Suspecting undergraduate pranks, he arranged a series of traps in an attempt to locate those responsible. What he discovered however, was computer infiltration on a grand scale, coming not from his beloved Berkeley campus, but deep in West Germany, home of the infamous Chaos Computer Club hacking group.

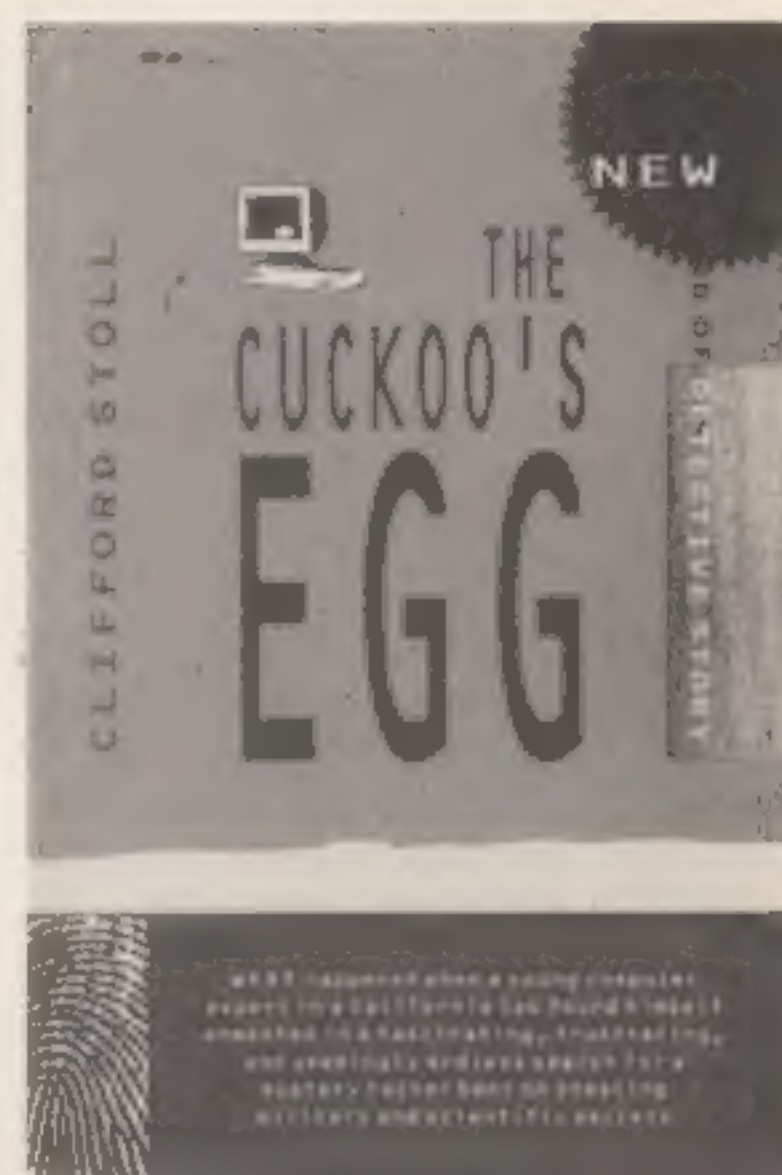
Expect a deathly dreary account of electronic tampering and you will be more than a little surprised, for *The Cuckoo's Egg* is a thrilling chase across computers, networks and continents worthy of the master William Gibson himself. And like a good crime novel, the book will have you guessing as to just who's responsible until the very end.

But what sets this book apart from the ever-widening computer crime chasm on the bookshelves is the 'human' element involved. Stoll interweaves the

hacker's escapades with his own amorous adventures in a shared house in downtown LA. Being dragged from bed (and his lover's arms) every time the hacker logs on and trips the electronic alarm, stepping naked and wet from the shower to rush to his Macintosh personal computer – colliding with a violin-playing housemate – and being deeply frustrated with the reluctance of crime fighting agencies such as the FBI and CIA to get involved, each merrily passing the buck to the other.

It's all here, good guys and bad guys, hackers and cyberpunks, thrills, spills, romance and computers. Lucid and competently written, *The Cuckoo's Egg* is an enjoyable read for all those even vaguely interested in high-tech.

*The Cuckoo's Egg* by Clifford Stoll, published by Bodley Head, is available priced £12.95 from all good High Street bookstores. ■



• Stoll's book: naff cover but a good read.

## Low tech help from CRL

An environment that will allow non-technical people to write a variety of complex programs has been developed by the veteran software publisher CRL.

Called DUNE (Developer's Universal Non-programming Environment), it can be used to write programs with interactive facilities and high-quality graphics on floppies, hard-disks or interactive CDs when they become available.

DUNE is aimed at three main markets and computers: IBM compatible PCs, probably for business applications; Acorn Archimedes for education and Commodore Amiga for home and leisure. ■

## Keyline on line

500,000 Keyline Shopping terminals will be in British homes by next year, according to the company which makes them.

Owners will be able to access a range of services from ordering supermarket goods to betting and banking provided by 18 well-known retailers. The brainchild of Chris Curry, ex-boss of Acorn, each small portable terminal will feature a built-in smart-card reader to hold password and automatic debiting data and will cost £50. Trial runs of the system will begin in the summer. ■

## REVENGE OF THE HAMSTERS

**THE Stun**

COMPUTER ENTERTAINMENT SOFTWARE

**ROCK STAR**

**ATE MY HAMSTER**

By Stun reporter  
**COLIN JONES**

**EXCLUSIVE ALIENS STOLE MY VOLVO!**  
see page 5

**SECOND EDITION**

**EXCLUSIVE**  
Sexy Wimbledon masseuse Suzy Nokkers, 27, last night told how ageing sicko rockstar HAZZY HASBEEN, 73, devoured her hamster, Bobo at a wild showbiz party on Rockall. "I didn't – I'm a vegetarian!" said Hazy.  
Full story inside.

**BUBBLES - I'M FOREVER BLOWING!**

Monkey Bubbles' nights of baked bean bingeing! We exclusively reveal today the REAL REASON why mega moneybags rock-star WACKY JACKO seals himself in an OXYGEN TENT!  
— Full story on page 5



• Remember Rock Star Ate My Hamster, the game which puts you in charge of a rock artist? Well, it's just been re-released by CodeMasters ■ a budget game for £2.99. In the game you get the chance to manage one of a number of popsters including Dross, Annie Smallpox, Bill Collins and Dorrissey. ■

## Computer tracks cheats

A new computer has been invented which could put an end to cheque book fraud.

The American machine can be taught to read handwriting and confirm whether or not a signature is genuine, an operation taking only four seconds.

Cheque book cheats would be caught out in seconds if the machine is taken on by retail organisations. It is claimed that the computer – invented by the Nynex Corporation – can read even virtually illegible handwriting and can cope with style changes. ■

## Bloc busts out

Four new specialist PC programs have been launched by Bloc.

Corporate Ladder allows users to create organisational charts, diagrams and trees based on products or families of products. You enter the text and the format of the chart and the program does the rest. It costs £69.

There's also PrintRite, an £89.95 print spooler for up to five printers.

DiskVision is a hard disk manager and archiving system costing £69.95, while PopDrop Plus allows you to install desktop accessories on your PC without taking up too much memory. It costs £89.95. Call 0983 405600. ■





## Sharp Organises a 64K computer for the wallet

Sharp has launched a new version of its wallet-sized electronic organiser - with twice the memory of the original.

The Sharp IQ-7200 has a 64K memory and measures just 9cm by 17cm. It weighs 250 grammes and comes with a built-in calendar, diary, world clock, telephone directory and memo pad offering 12 pages of electronically stored briefs, reports and letters.

Users can also load in a variety of IC cards including a thesaurus, an eight-language translator and a time/expense manager.

There's also an optional PC link which costs £99. The IQ-7200 costs £179 with the 12-month-old IQ-7000 retailing at £149.

• Left: The Sharp Organiser now has a higher IQ

## Brother gets the Blues

Printer and PC manufacturer Brother has extended its sponsorship deal with soccer club Manchester City.

The deal is worth £1 million to the club - currently placed in the bottom half of the first division. Brother initially signed a three-year agreement at the start of the 1987/88 season. The new deal secures the relationship for a further three years.

One of the reasons for choosing City is Brother's proximity to Maine Road - its European headquarters are in Audenshaw, Manchester. Apart from computer kit, Brother also manufactures fax machines, mechanical office equipment and white goods such as microwave ovens.

Other computer companies affiliated to the football league include Commodore (Chelsea) and NEC (Everton). Amstrad was also close to tying a deal with Spurs a few years ago.

## Mad prices in Manchester

A new 'buyers show' is to be launched this month in Manchester - Computer Cash 'n' Carry '90 promises loads of bargains for those of us with a tight budget.

The EMAP Exhibitions event is to be staged at the Manchester's G-Mex from Thursday March 15 to Sunday March 18. It costs £4.50 to get in, or £10 for a family ticket. "A lot of exhibitors will be having special show offers," claim the organisers. Call 01-404 4844 for more information.

## Jersey joins the smart set

For the first time anywhere in Britain, inhabitants of the exclusive island of Jersey will soon be able to pay for most of their purchases with a smart card.

Terminals will be situated throughout the island at retail outlets, petrol stations and leisure centres. The cards will also carry medical information about their carrier, enabling the local health service to quickly diagnose ailments. The Jersey MultiCards will be available in the next few months.

The first console games for under £10 are here

# SEGA DROPS PRICES OF ITS CARTRIDGES

The price of a large range of Sega game cartridges has been slashed in a surprise move by the console's European distributor Virgin/Mastertronic.

As of March 15, six titles - Enduro Racer, Ninja, Rescue Mission, Super Tennis, Teddy Boy, and Transbot will cost £9.99. It's the first time Sega games have cost less than £10.

Six more games have been reduced to £12.99. They are Action Fighter, Aztec Adventure, Fantasy Zone, Global Defence, Secret Command and World Grand Prix.

Console cartridges have traditionally cost anything from £20 to £30 each. Virgin says there are plenty of hardware owners who want to increase their library of games without having to spend £22.50 on each product.

The firm claims that there are now at least 200,000 Sega owners in the UK. "One of the only consumer negatives about console software has been its high price - we have therefore been working with Sega for some time in order to try to create a low-priced software range and we're delighted that we have been able to achieve this," commented brand

manager Philip Ley late last week.

Almost immediately, Nintendo distributor Serif hit back. In a public statement the firm's deputy managing director Rae Potter said: "I think we're seeing a competitor on the run. Sega are either seeing a lower than expected demand for their products or are worried about the rapid progress Nintendo is making - probably both."

He also taunted Sega about its poor performance in the US compared to Nintendo. Nevertheless, in the UK the Sega is way ahead of the Nintendo in terms of sales.

## Sea the latest accelerators



What has windsurfing got to do with PC enhancer boards? Hypertech has the answer.

The firm will be launching a series of turbocharging boards at the Which Computer? Show in April and will be giving a surfboard away in a special competition. The surfboard may not be a lot of use to most of us, but PC owners might want to get stuck in to the add-on boards.

The low end Hyperace II is pitched as "the ideal upgrade product for PC users". It slots into a number of 8086 and 8088 PCs - including Amstrad models - and gives you extra 286 speed. Retail price is £299. Call 0627 63936.

## CompuAdd adds 286

CompuAdd has launched a new small footprint 286 PC.

The CompuAdd 220 comes with 1Mb of RAM expandable to 4Mb. It comes with a 40Mb hard disk with 80 and 110Mb options. The machine runs at 20MHz, has five expansion slots and two serial ports.

It costs £1,389 and comes with free 12-month on-site maintenance cover. The 220 replaces a larger model which used to cost £350 more.

Meanwhile, CompuAdd is to start selling 'Network Starter Kits' each of which will feature Novell network software, Ethernet hardware and a choice of 286 or 386-based file server.

The Workgroup Starter Kit will link up four machines, while the Department Starter Kit can manage eight.

Call CompuAdd on 0272 254789 for more details.



# COMMENT

**With the latest round of bundling for the ST, is Atari deliberately discouraging prospective buyers from taking the STE as a 'bare' package?**

**J**ournalists' diaries have carried the pencilled comment 'New package for ST?' against the end of February or start of March for many months now, so it comes as no surprise to learn that Atari does indeed have plans for re-bundling the machine.

What was not easily foreseen – though perhaps in retrospect it should have been – was precisely the type of twin-pronged initiative that the company would devise for the ST's assault on the market this year.

It was assumed in some quarters that the new STE would immediately become the *de facto* ST standard, and that the STFM would simply become Last Year's Model almost overnight. Stocks of the old machine would be run down during the spring (while the myriad software compatibility glitches were ironed out) and the STE would emerge like some sort of electronic butterfly for the summer.

## NEATLY TAILORED

Of course, any such neatly tailored plan would, in any case, have been superseded the moment it became necessary to ship in advance STE units when STFM stocks proved inadequate to satisfy the Christmas market. A 'clean' launch for the STE was impossible.

This aside, Atari's decision to persist with the STFM as a 'first-time buyer's machine' is an interesting one. At £299, the Discovery Pack does not change the size of cheque which must be signed to take possession of an entry-level ST, but the mysterious package of bonus software which will be bundled with the STFM means that, in real terms, the price of the machine has been reduced.

If the value of added extras is in any way comparable with that involved in the discontinuing Powerpack, the

effective price-cut on the STFM is as much as £100 – good news for buyers who have hung on for post-Christmas bargains, and presumably providing a stock-flow boost to Atari over the traditionally lean summer months.

The way that Atari is handling the STE adds to one's impression that the company is at least passively discouraging the 'bare machine' concept.

At £399 the bare STE compares unfavourably with the Powerpack that, price-wise, it directly replaces. The current package (theoretically if not actually containing only STFMs) has bundled software with a notional value of around £500 – an astonishing figure to place as the premium on the newer machine.

## SERIOUS

The £499 1040STE bundle, on the other hand, will come with a quoted £400 worth of 'serious' software. Interestingly, both the price of the package and the stated value of software precisely match a 'Professional Pack' already available with the STFM. So for users of such software, the STE comes at exactly the same price as the machine it replaces.

Perhaps it is to read too much into this to regard it as a thoroughly calculated and concerted Atari push to represent the ST as far more than a games machine, but this will certainly be the net result of applying the proposed price bands.

But then the workings of Atari's corporate mind are never easy to fathom. Does the new set of bundles imply that the early STE release was not a fiasco at all, but a way of supplying 'cut-price' units which were paid for by their owners in trouble-shooting?

The idea is attractive, but in the end probably no more than fanciful. In all events, the proof of the bundles is clearly to be found in their units sold. ■

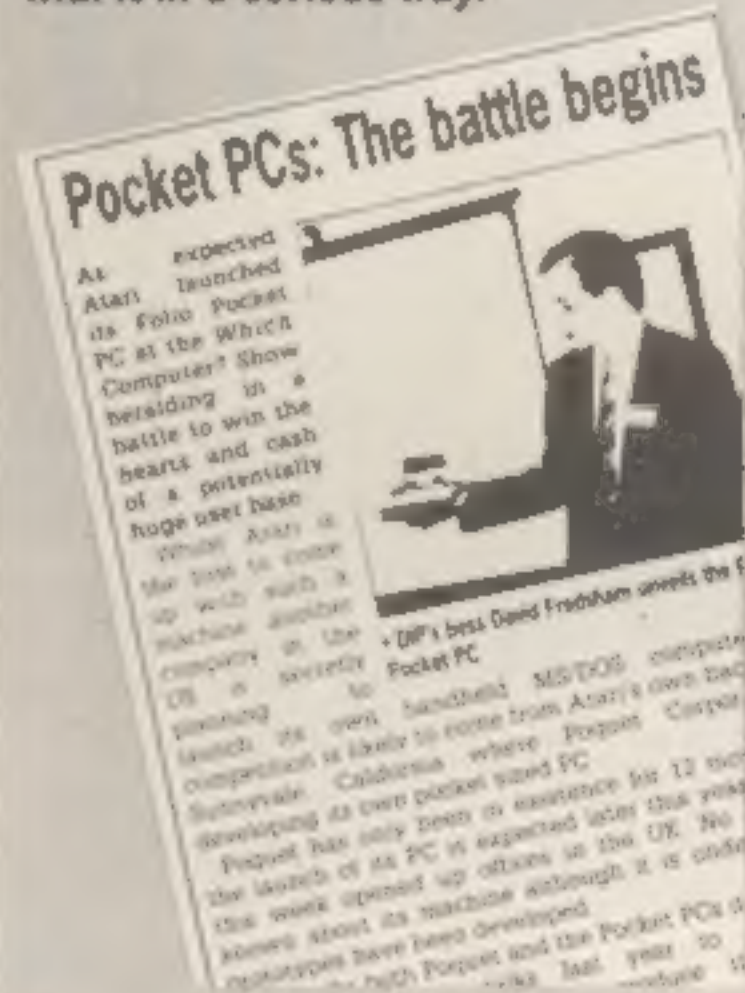
# FROM The ARCHIVE

## ONE YEAR AGO

It was the week of the *Which Computer?* Show at the NEC, Birmingham, and there was an absolute orgy of unveiling, revealing releasing and announcing ...

Commodore finally produced a hard drive for the Amiga 500. Price predictions for the A590 hovered around the £500 mark (it came out at £445), but it didn't actually become available until September.

Acorn trotted out its UNIX workstation with 'a fistful of baffling applications and software'. However, since it was priced at £3,500, not too many of us ever had to grapple with it in a serious way.



Atari brandished its much-hyped Pocket PC Portfolio, in the hopes that no one would notice that the Mega 1 ST hadn't quite arrived.

The Transputer Workstation, however, buzzed away impressively and fascinated the crowds.

For once Amstrad didn't have a lot to say, except that it was confident at least as far as the success of the PC2000 was concerned.

Elsewhere – London's Baker Street to be exact – Level Nine was winning

what was claimed to be Britain's most prestigious 'adventuring' award.

*Ingrid's Back* was voted Best Adventure of 1988, despite receiving only lukewarm reviews when first released the previous autumn.

The trade press was 'rocked' (that is not to say, surprised) by the news that Telecomsoft was up for sale after a management buy-out effort came up a little bit short.

Speculation at the time concentrated on the giants Mirror Group, Mediagenic and NEC.

The company was eventually purchased by MicroProse.

Gremlin was forced to call back its big name ST title *Federation of Free Traders* because of... gremlins. You can probably guess how much fun the headline writers had.

The game had taken two years to develop and it had been seemingly endlessly dogged by disaster.

The final problem was that the game could not be saved onto another disk – a major catastrophe for serious game players.

"We had people play-testing it for a week non-stop but some bugs will always get through," said a spokesman for the company, bravely.

"We made a few mistakes on the manual as well," he also said.

## TWO YEARS AGO

The DRAM chip shortage made itself felt by pushing up prices on the computer front – predicted as a 12.5 per cent increase for Amstrad and 33 per cent for Atari.

Other manufacturers were expected to follow suit – although Commodore ruled out any increases 'for the foreseeable future'.

Commodore stuck to its guns and six weeks later even went so far as to cut the price of the PC1 by £100 to £399 – not a bad idea since the machine hadn't been incredibly popular up to that point. Indeed, Amstrad's solution had been to cut dealer margins...

Sources: *New Computer Express*, *Computer Weekly*, *Computer Trade Weekly*, *MicroScope*, *PC Dealer*, *Computer Talk*, *DataLink*.

### CONTRIBUTORS



# ATARI ST and C AMIGA

## Sixteen Bit Superdeals from the Sixteen Bit Specialists!

**CUSTOMERS PLEASE NOTE!** When comparing prices remember ours include fast delivery by courier.

**NEW!!**

### 520STE Power Pack

**£359.00**

*Inc. VAT and Next Day Delivery*

**NEW STE**

#### Power Pack includes:

- ★ 520STE 512K Keyboard with Built-in 1 Megabyte disk drive and TV Modulator
- ★ 4096 Colour Palette
- ★ 8 Channel digital stereo sound
- ★ 4 Joystick Ports
- ★ Over £550 worth of games software, including OutRun, Gauntlet 2, R-Type, Space Harrier, Super HangOn and 16 more Top Games
- ★ Organiser Business Software including WORDPROCESSOR, SPREADSHEET and DATABASE
- ★ First BASIC and First Music Utility Software
- ★ FREE JOYSTICK AND FREE MOUSE MAT WORTH £4.95
- ★ All leads, manuals PLUS MOUSE and free mains plug!

**REMEMBER!** Many ST's do not come with BASIC - ours come with ST BASIC REV D by Metacomco

### 520STE Explorer Pack

**£279.00**

**NEW STE**

- ★ Explorer Pack includes 520STE 512K Keyboard with built-in 1 Megabyte Disk Drive and TV Modulator.
- ★ 1 FREE Game, ST Tutorial and METACOMCO Basic worth £25.00.
- ★ All leads, Manuals PLUS MOUSE and FREE Mains Plug!
- ★ Free mouse mat worth £4.95.

### 1040STE BUSINESS PACK

**£479.00**

- ★ Includes the new 1 megabyte 1040STE keyboard plus FIRST WORD wordprocessing software, SUPERBASE PERSONAL Database Software and NEOCHROME graphics package. Also includes Metacomco BASIC, Mouse Pad, all Leads, Manuals and Mouse.
- ★ 1040STE keyboard without software **£439.00**

### MEGA 1 BUSINESS Pack

**£529.00**

#### Features:

- ★ Separate Keyboard and System Unit
- ★ Inc. all software supplied with 1040 STE Business Pack
- ★ Blitter chip installed for faster graphics
- Inc SM124 Mono Monitor.....£628.00

### ACCESSORIES

Quickshot II Turbo Joystick.....£9.95	Branded Memorex 3.5" DSDD Disks
Competition Pro 5000 Joystick.....£13.95	Box of 10.....£13.95
Competition Pro with Autofire.....£14.95	Memorex Disk Box
Konix Speedking Joystick.....£11.95	For 40 3.5" Disks.....£8.95
Red Mouse Mat with Amiga logo.....£5.95	Amiga 1/2 Meg Expansion.....£119.95
Plain blue Mouse Mat.....£4.95	Control Centre Atari or Amiga.....£44.95

Contriver Amiga and ST Mouse with FREE Holder and Mouse Pad £20.95

### PRINTERS

Star LC24-10 24Pin incl. lead ST/Amiga.....£249.00
Star LC10 including interface lead for ST/Amiga.....£169.00
Star LC10 colour including interface lead for ST/Amiga.....£219.00
Citizen 120D including interface lead for ST/Amiga.....£159.00
Citizen 120D including interface lead.....£139.00

#### SEIKOSHA 80 COLUMN PRINTERS - AMAZING PRICES

Seikosha 9 pin NLQ including interface lead for ST/Amiga.....£139.00
Seikosha 24 pin LQ including interface lead for ST/Amiga.....£239.00

### AMIGA A500 BAT GAMES PACK

**£399.00**

*Inc. VAT and Next Day Delivery*



#### BAT Games Pack includes:

- ★ Amiga A500 512K Keyboard with Built-in 1 Megabyte disk drive.
- ★ Free TV modulator worth £24.99 allowing you to use the Amiga with a normal TV.
- ★ DELUXE PAINT II GRAPHICS PACKAGE.
- ★ PHOTON PAINT II graphics package with animation worth £70.00.
- ★ FREE, only-just-released BATMAN - THE MOVIE games software.
- ★ NEW ZEALAND STORY arcade games software.
- ★ F16-INTERCEPTOR - amazing 3D flight simulator software.
- ★ A further £230 worth of Games Software, including BUGGY BOY, MERCENARY, BARBARIAN, WIZBALL & six more games.
- ★ FREE JOYSTICK, MOUSE MAT AND 10 BLANK DISKS.
- ★ Amiga BASIC, Amiga EXTRAS 1.3, Workbench 1.3 PLUS the Amiga Step by Step Tutorial.
- ★ All leads, manuals PLUS MOUSE and mains plug!

### AMIGA 1 MEG BAT GAME PACK

**£529.00**

#### 1 Meg Bat Games Pack includes:

- ★ Fitted 1 Megabyte Memory Expansion + Real Time Clock Card
- ★ Everything listed for the A500 Bat Game Pack
- ★ DRAGON'S LAIR 1 MEG MEGAGAME!



### AMIGA A500 CLASS OF THE 1990'S BUSINESS + EDUCATIONAL PACK

**£549.00**

#### FEATURES:

- ★ Amiga A500 + TV Modulator
- ★ Midi Interface + Software
- ★ Kind Words II word processor
- ★ Page Setter DTP
- ★ Super Base Personal Database
- ★ Maxiplan 500 Spreadsheet
- ★ Amiga Logo, BBC Emulator, Deluxe Paint II
- ★ Mouse mat, 10 blank disks and disk wallet

### EXTERNAL DISK DRIVES

Atari SF314 1 Megabyte.....£139.00
Amiga A1010 1 Megabyte.....£109.00
Cumana 1 Megabyte Atari or Amiga.....£89.95
NEC 1 Megabyte Atari or Amiga.....£79.95
Atari Megafile 30 Hard Disk.....£439.00
New! Commodore A590 20 meg hard disk.....£369.00
A590 Hard Disk + Memory Upgrade installed.....Phone

### MONITORS

Commodore Amiga A1084 stereo Monitor inc lead.....£269.00
Atari SC1224 Colour Monitor inc lead.....£259.00
Atari SM124 Mono Monitor including lead.....£119.00
Philips CM8833 stereo colour monitor inc. lead for ST or Amiga.....£259.00

### CREDIT CARD ORDERLINE \* 0908 378008 (Mon - Sat 9am - 6pm)

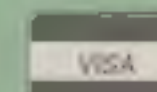
To order either call the orderline above with your Credit Card details OR make a cheque or P.O. payable to: Digicom Computer Services and send it with your order to the address below. Callers are also most welcome at the address below.

### DIGICOM

Unit 36, Wharfside, Fenny Stratford, MILTON KEYNES, MK2 2AZ.

All prices include VAT and delivery by courier  
Written details on request APR 34.5% Variable.

**INSTANT CREDIT NOW AVAILABLE**







## IB MPRESSED

Us yokels in the West Country be easily overawed with the technical wizardry of them laddies and ladies from the New World. A recent circular from the world's favourite blue-striped computer company set out to check on its mailing list for journo. 'Which products did I want info on?', it asked - I ticked a few headings.

Within a week I was inundated with press releases on just about everything imaginable from IBM. So, in case you find that corporate giant as interesting as I do, here's what they contained.

IBM has just released a personal information manager called *Current*. It's the kind of product which can benefit from the multi-tasking of Windows, the environment under which it runs. Though not cheap, at £372.60, the press release is keen to point out that the user interface is in English - that'll be handy.

The other six releases turned out to be about a set of reduced instruction set computer (RISC) workstations, which start at around £10,000 and head on upwards.

The documents start with 'IBM Announces High-Performance RISC Workstation Family'. A reasonable approach, given the subject matter and the target audience - in all the document runs to 11 pages.

The next release, 'RISC System/6000 Powerstations and Powerservers Set the Pace for Price/Performance', followed up on the first announcement with details

of the actual machines - 10 pages.

I started to flag at 'IBMs Innovative Technology and Design Produces Advanced Workstations and Software' - nine pages - which develops the architecture of the new machines.

The next two - 11 pages between them - delve into a new version of AIX, IBM's Unix, and the graphical user interface designed to hide it from the user. Severely sleepy, I only just managed to wade through 'IBM Expands SAA/AIX Intercompatability Capabilities' - which ran to 11 pages.

Does the word 'overkill' mean nothing to the IBM PR department? It is an important announcement, but 52 pages banging onto the breakfast table with your All Bran makes you want to run faster than the cereal does.

## TURNING THE TABLES

As if to prove that I do actually do some serious work with the DTP kit I go on about in this column, last week I laid up the trade price list for Salcombe Dairy ice cream.

This is by far the most delicious ice cream on the entire planet, with the possible exception of Dayville's Butter Pecan. We had one of the ice cream Christmas cakes this year and it was amazing, though we couldn't blaze it in brandy - but I digress.

The original idea was to take the existing Windows Write files and just change the figures from last year. As it turned out, the files supplied were rather older than 1989 and it was necessary to lay out the whole list.

Turning to *Timeworks DTP* as the program I know best, this relaying proved to be a fairly painless job, once I remembered how to use the tab facility.

Tabs in *Timeworks* come into force if you set the justification to 'table' mode. You then have 10 tabs available, which you can set to the nearest .01 inch.

Each tab can be left, right, centred or decimal. This system worked well using decimal tabs, except for a column which included £1.60 and 50p.

The 50p wasn't correctly aligned and had to be entered .50p for the decimal tab to take effect. There seems to be no way round this - I just hope none of

## NERD AFTERTHOUGHT

While trying to convince a poet friend of mine that, yes, Newman's *Electronic Rhyming Dictionary* really does exist, said friend remarked upon a coincidence that thankfully did not come to pass.

My friend, like myself, is interested in

the acronyms that magically appear around us. Further, she said that it was lucky for the people who bring us *NERD* that the name wasn't Thompson's Universal Rhyming Dictionary instead.

I have to admit she has a point.

Salcombe Dairy's customers try and buy tubs of ice cream at half a penny a go! Indeed, as they say, the true proof is in the tasting, and if any of you out there are able to taste ha'p'orth of ice cream, do let me know.

## KWIK, COPY THIS DISK

The Ctrl Alt Deli, distributors of many new and innovative products, seems to have been quiet for a while now. However, Nigel Grant, its MD, has just dropped me a copy of the company's own fast disk copier, *KwikCopy*.

The program replaces DOS's *DISKCOPY* command and is intelligent enough to copy only the tracks with data on them and to make multiple copies from a single read of the source disk.

To achieve this last feat, the program uses a temporary file on a hard disk to act as a spooler. *KwikCopy* is considerably quicker than *DISKCOPY*, with the increase in speed more marked for higher-capacity disks. For instance, to copy five, 1.2Mb disks under DOS on an 8MHz AT takes over 11 minutes and involves 25 disk swaps. The same operation under *KwikCopy* takes around three minutes with only five swaps.

Each copy is verified twice and the whole program is menu driven. It even checks you've got the source and desti-

nation disks in the right drives to avoid writing to the source by mistake. *KwikCopy* costs £56.35, and *KwikCopy Plus*, with extra optimisation and the ability to use EMS memory as a spooler, comes in at £67.85.

Ctrl Alt Deli is on 0908 662759. Oh, and Nigel, did *What Personal Computer* really say 'For simple, hassle free disk copy *KwikCopy* ain't all bad'? Shouldn't there be an 'at' in there, somewhere?

## A BIG BUILD-UP

It's been as hard to tie down a copy of *The Builder* - a batch file processing package I've been very keen to try - as hard, in fact as it usually is to book a call from a good carpenter.

Software Paradise, in its usual helpful way, is still indisposed, as the program hasn't been released in the US. But a recent letter from Nigel Nock of SP assured me that he had actually held a copy in his hand, and that the first of the software packages had to go to customers who had pre-ordered.

Nevertheless, said Nige, you can tell it really exists as I've enclosed a photocopy of the box. Well, it may exist, but I'm not counting my chickens, particularly as there was no photocopy in the envelope!

Simon Williams

## A LITTLE AMSTRAD CREDIT

Alan Sugar is renowned for disliking the Press, and with some justification. There have been some mean rumours circulated about the company which bears his name, and any rumour that can knock millions of pounds off your personal fortune, even if only notional, must hurt.

So, for what it's worth, I'm happy that he seems to have pulled the company round and set it on an even keel. I believe it must have been hard to sell some of the stockpile of 2000 series PCs, and even harder to push the Sinclair 200 - a fact which even Amstrad seems to have conceded.

What Malcolm Miller said of 'a new product



• The 2000 series - at first hard to sell.

every month from April' sounds exciting, and should encourage the share price. And the idea of doing something positive with the CPC range is long overdue.

Overall, things look

pretty bright for the company, though I agree with the Editor that its fax machine looks somewhat overpriced. At any rate, we shall certainly see what we shall see!

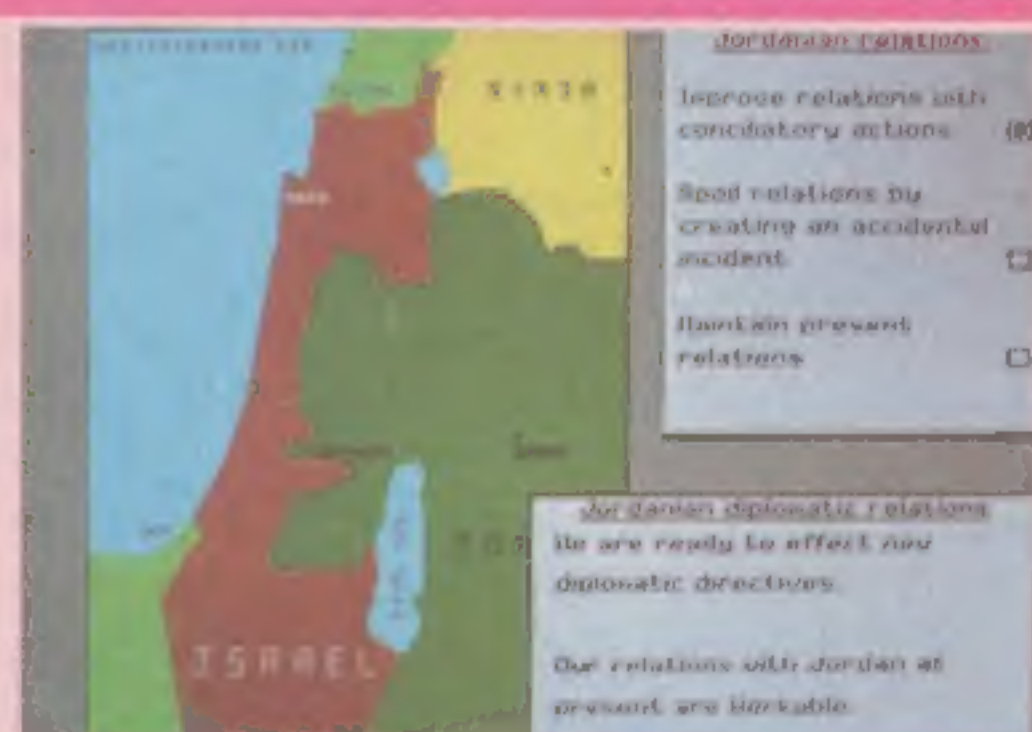
## PC GAME OF THE WEEK

Virgin Mastertronic • £4.99

What is the worst job in the world? If the latest title on Virgin Mastertronic's budget 16 Blitz label is anything to go by, being Prime Minister of Israel is a hot contender.

*Conflict* is a political simulation set in the Middle East of 1997. You are surrounded by a powerful and ambivalent Egypt, a Syria heavily funded by the Russians, an unstable Lebanon, a neutral Jordan, a chaotic Libya and a war waiting to happen between Iran and Iraq.

Your long term aim is the collapse of four neighbouring governments. But your short term aim is survival, at least for the six months or so it takes you to develop and to build a nuclear weapon, after which people seem to take you



rather more seriously.

Each month you get the opportunity to influence your relationship with other countries by entering into trade negotiations, causing diplomatic incidents, supporting insurgent groups or other such actions.

You can also buy arms from various Western powers (provided you have behaved in a suitably civilised fashion), deploy your forces as necessary and even enter into armed combat. At the end of each move your fate is signalled by the newspaper headlines, and hopefully you remain in power for another month.

Your relationship with each country is influenced

by your relationship with its friends and enemies in a complex fashion that makes survival no easy matter. Despite its futuristic setting, the simulation closely follows the situation in the Middle East around 1979, and appears to react fairly sensibly to developing situations without obvious political bias.

*Conflict* does take a fairly cynical view of Israel's situation and is only a game, but it is accurate enough to set you thinking. (Thinking? Just reading the review gives me the heebie-jeebies - Ed). And for under a fiver this game represents exceptional value.

Matt Nicholson



QUALITY  
SUPPORT  
SERVICE

# Technology Centre



## DOT MATRIX PRINTERS

9 PIN NARROW CARRIAGE	CPS	PRICE £
STAR LC-10	144/36	125
STAR LC-10 colour	144/36	166
STAR LC-10 colour comm 64	144/36	166
CITIZEN (101)	120/25	108
CITIZEN 120D comm 64	120/25	108
CITIZEN 180E	150/30	118
PANASONIC KXP 1081	144/28	122
PANASONIC KXP 1180	192/36	239
MAN. TALLY MT-81	130/26	107
OLIVETTI DM 100SPR	200/30	119*
OLIVETTI DM 105SPR colour	200/30	159*
EPSON LX 400	180/30	135
EPSON FX 850	244/54	354
HYUNDAI HDP 900	180/34	134*

**HYUNDAI HDP910**  
WITH 1 YEAR  
ON-SITE WARRANTY  
**£127**

9 PIN WIDE CARRIAGE	CPS	PRICE £
STAR LC-15	180/45	255
PANASONIC KXP 1591	216/45	255
HYUNDAI HDP 920	180/34	214*

**HYUNDAI HDP920**  
WITH 1 YEAR  
ON-SITE WARRANTY  
**£199**

11 PIN NARROW CARRIAGE	CPS	PRICE £
STAR LC24-10	170/57	395
CITIZEN SWIFT 24	140/53	239
PANASONIC KXP 1124	192/63	219
EPSON LQ 860 colour	290/88	549

24 PIN WIDE CARRIAGE	CPS	PRICE £
STAR LC24-15	200/67	325
STAR XB24-15	240/80	510*
EPSON LQ 1050	290/88	549

\* ALL DOT MATRIX PRINTERS MARKED WITH AN \* INCLUDE A 1 YEAR ON-SITE MAINTENANCE CONTRACT.

A 1 YEAR ON-SITE MAINTENANCE CONTRACT IS ALSO AVAILABLE ON ALL OTHER DOT MATRIX PRINTERS - ONLY £16.

A FULL RANGE OF SHEET FEEDERS, TRACTORS, ACCESSORIES & CONSUMABLES ARE ALSO AVAILABLE FROM STOCK - CALL FOR DETAILS.

## WARRANTY

ALL GOODS CARRY MANUFACTURERS WARRANTIES. ON-SITE WARRANTY AVAILABLE ON ALL DOT MATRIX PRINTERS AND PCs - CALL FOR DETAILS. TECHNICAL SUPPORT AVAILABLE. E. & O.E.

Goods not offered on trial basis. Goods are offered for sale subject to our standard terms and conditions of sale - available on request.

WE STOCK MANY MORE PRODUCTS - CALL FOR DETAILS. LARGE STOCKS OF FLOPPY DISKS AND RIBBONS CARRIED.

## TERMS

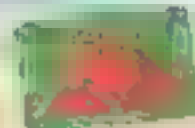
ALL PRICES EXCLUDE VAT. PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE. CALL TO CONFIRM BEFORE ORDERING. STRICTLY CASH WITH ORDER. ACCESS & VISA WELCOME. POSTAL ORDERS, CHEQUES AND BANKERS DRAFTS ACCEPTED. OFFICIAL ORDERS FROM EDUCATIONAL & GOVERNMENT ESTABLISHMENTS, CORPORATES & PLC'S WELCOME.

## DELIVERY

ALL GOODS NORMALLY DESPATCHED WITHIN 24 HOURS FROM RECEIPT OF CLEARED PAYMENT - subject to stock availability.

PC'S AND LASERS	£15.00	NEXT DAY DELIVERY
OTHER LARGE ITEMS	£10.00	NEXT DAY DELIVERY
SMALL ITEMS	£5.00	4 DAY DELIVERY

VISA



## LASER & INK JET PRINTERS

		PPM	PRICE £
STAR LASER 8	DUAL BIN	1195*	
STAR LASER 8	DUAL BIN	1449*	
H. PACKARD LASERJET II	8PPM	1299*	
CANON LBP-10	8PPM	1379	
CANON LBP-10T	DUAL BIN	1699	
CANON LBP-10T	DUPLEX DUAL BIN	1899	
OLIVETTI PG 304	4PPM	899*	
OLIVETTI PG 200	8PPM	1199*	
MAN. TALLY MT-905	6PPM	879*	
MAN. TALLY MT-910	10PPM DUAL BIN	2054*	
PANASONIC KXP 4450	11PPM	1269*	
EPSON GQ 5000	6PPM	1059*	
CANON BJ-130	INK JET	535	
MAN. TALLY MT-91	INK JET	541	
OLIVETTI TH-760	THERMAL	525*	

(equivalent to IBM QUIETWRITER)

**OLIVETTI TH-760**  
**THERMAL PRINTER**  
(equivalent to IBM QUIETWRITER)  
**£525** WITH 1 YEAR  
ON-SITE WARRANTY

\* ONE YEAR ON-SITE MAINTENANCE IS INCLUDED IN THE PRICE OF ALL THE ABOVE PRINTERS MARKED WITH AN \*.

A FULL RANGE OF TONERS, FONTS, MEMORY CARTRIDGES, INK CARTRIDGES AND OTHER ACCESSORIES ARE STOCKED. PLEASE CALL FOR FURTHER DETAILS.



## PLOTTERS & SCANNERS

HITACHI 681	A4/A3 PLOTTER	520*
HITACHI 673	A4/A3 PLOTTER	606*
H. PACKARD 7440	A4 PLOTTER	619*
H. PACKARD 7475A	A4/A3 PLOTTER	899*
CANON IX-12T	SCANNER	659
CANON IX-31F	SCANNER INTERFACE	99
CANON O.C.R. SOFTWARE		300
NISCAN HANDSCANNER		139
NISCAN O.C.R. SOFTWARE		109



\* ONE YEAR ON-SITE MAINTENANCE IS INCLUDED IN THE PRICE OF ALL PLOTTERS.

## CABLES AND CONNECTIONS

PRINTER CABLE	1 METRE	8
PRINTER CABLE	3 METRE	9
MODEM CABLE	1 METRE	10
T SWITCH	2 WAY SERIAL	18
T SWITCH	2 WAY PARALLEL	18
T SWITCH	2 WAY SERIAL CROSSOVER	25
T SWITCH	2 WAY PARALLEL CROSSOVER	25
BUFFER	64K IN-LINE	79

THIS IS JUST A SMALL SELECTION OF OUR RANGE OF CABLES, SWITCHES, BUFFERS ETC. PLEASE CALL FOR FURTHER DETAILS.

## PORTABLE PC'S

AMSTRAD PPC 512s	SD	349
AMSTRAD PPC 640s	SD	439
SHARP 4602	DD	839
SHARP 4641	HD40	1439
SHARP 5541	HD40	2349
SAMSUNG S5200 286	HD32	1707

## COMPUTERS

AMSTRAD (includes monitor)	MONO £	COLOUR £	EGA £
PC 1512 SD	348	442	-
PC 1512 DD	442	517	-
PC 1640 SD	463	541	623
PC 1640 DD	513	598	683
PC 1640 HD30	682	767	857

## COMMODORE STARTER PACK (includes monitor)

ALL MODELS INCLUDE 1 YEAR ON-SITE MAINTENANCE  
8088; 4.77/7.16/9.54mhz; 640K ram; 3 slots; enhanced keyboard. Includes: serial/parallel ports; clock; 1 or 2 360K drives; hard disk controller; MS-DOS 3.21, GW basic & manuals.

	MONO £	CGA £	EGA £
PC 10 SD	495	629	739
PC 10 DD	559	699	799
PC 20 HD20	679	799	929

(As PC 10 SD but includes hard disk drive)

## SAMSUNG (monitor not included)

ALL MODELS INCLUDE 1 YEAR ON-SITE MAINTENANCE  
80286; 10/12mhz; 1mb ram (exp. to 5mb); 5 slots; enhanced keyboard. Includes: serial/parallel ports; clock; 1 x 1.2mb & 1 x 1.44mb drives; hard disk controller; MS-DOS 3.3, GW basic & manuals.

	MONO £	CGA £	EGA £
SPC 4512/1 DD			1029
SPC 4512/2 DD	HD20		1306

## HYUNDAI (monitor not included)

8088; 4.77/10mhz; 640K ram; 5 slots; enhanced keyboard. Includes: serial/parallel ports; clock; 1 or 2 360K drives; MS-DOS 3.3, GW BASIC & manuals.

	MONO £	EGA £
SUPER 16TE SD	399*	452
SUPER 16TE HD30	509	658

\* SPECIAL INTRODUCTORY OFFER ON SUPER 16TE SD MONO ONLY... INCLUDES 12" MONO MONITOR... £378



80286; 8/12mhz; 640K ram; 6 slots; enhanced keyboard. Includes: serial/parallel ports; clock; 1 or 2 1.44mb drives; MS-DOS 3.3, GW BASIC & manuals.

	MONO £	EGA £	VGA £
286s SD	744		769
286s HD30	980		1091

## AKHTER (monitor not included)

8088; 4.77/7.15/9.54mhz; 640K ram; 1 slot; 84 key compact keyboard. Includes: serial/parallel ports; clock; 1 or 2 720K drives; MS-DOS 4.1, GW BASIC & manuals.

	MONO £	VGA £
MINI-PC SD	441	554
MINI-PC HD20	479	593

80286; 8/12mhz; 1mb ram (exp. to 5mb); 7 slots; enhanced keyboard. Includes: 2 serial/2 parallel ports; clock; 1 x 1.2mb drives; hard disk controller; MOUSE, WINDOWS, MS-DOS 4.01, GW BASIC & manuals.

	MONO £	VGA £
AT 286-12 SD	779	876
AT 286-12 HD40	1071	1168

THIS IS ONLY A SMALL SELECTION OF THE PC'S THAT WE STOCK. CALL FOR FURTHER DETAILS.



## MONITORS & CARDS

Mono monitors are available with green, amber or paper white displays - please state preference when ordering.

			PRICE £
MONO	HYUNDAI HMM 1200	12"	65
MONO	HYUNDAI HMM 1201 FST	12"	70
MONO	HYUNDAI HMM 1401	14"	88
MONO	PHILIPS BM 7513	12"	73
MONO	PHILIPS BM 7913 FST	12"	80
MONO	PHILIPS BM 7713 FST	12"	96
MONO	SAMSUNG MA 2673/3/5 FST	12"	81
MONO	SAMSUNG MA 4671/3/5 FST	14"	88
MONO	AKHTER MONO 12	12"	65
MONO	AKHTER MONO 14 FST	14"	79
MONO VGA	PHILIPS BM 1749 FST	13" P/WHITE	107
MONO VGA	AKHTER VGA 14M FST	14" P/WHITE	99
MONO VGA	SAMSUNG ML 2611	13" P/WHITE	81
MONO VGA	SAMSUNG ML 4571	14" P/WHITE	95
MONO A4	SAMSUNG MP 5671 (inc card & drivers)		634
CGA	PHILIPS CM 8833	14"	209
EGA	HYUNDAI HCM 1420	14"	256
EGA	PHILIPS CM 9073	14"	289
EGA	SAMSUNG CM 4551	14"	281
VGA	HYUNDAI HDM 401 FST	14"	253
VGA	PHILIPS 3CM 9009	14"	372
VGA	SAMSUNG CJ 4581	14"	281
VGA	AKHTER VGA 14	14"	273
MULTISYNC	SAMSUNG CT 4581	14"	340
MULTISYNC	AKHTER ECM 9400	14"	360
	MDA/CGA CARD with PRINTER PORT		45
	MDA/CGA/EGA CARD		99
	VGA CARD		148



CITIZEN	OSDD 05A-WD	3.5" 720K (in 5.25" KIT)	59
CITIZEN	OSDA 39C-WD	3.5" 1.44mb (in 5.25" KIT)	69
CITIZEN	OSDD 76A-WD	3.5" 720K AMSTRAD KIT	59
AKHTER	AMS 360A	5.25" AMSTRAD 1000 360K External	79
YE DATA	360 INTERNAL	5.25" 360K	59
TEAC	1.2 INTERNAL	5.25" 1.2mb	69
JAVELIN	HC20	20mb XT HARD CARD, 62ms	185
JAVELIN	HC30	30mb XT HARD CARD, 62ms	199
JAVELIN	HC40	40mb AT HARD CARD, 25ms	SPECIAL 399
JAVELIN	HC100	100mb AT HARD CARD, 6ms	SPECIAL 899
KYOCERA	KC 20B(s)	20mb XT/AT DRIVE, 62ms, 3.5"	138
KYOCERA	KC 30B(s)	30mb XT/AT DRIVE, 62ms, 3.5"	158
KYOCERA	FRAME	5.25" 111 for 3.5" hard drives	5
XT 20	HD CONTROLLER		
XT 30	XT MFM		44
XT 30	HD CONTROLLER		
XT 30	XT RLL		44
AT 20	FD/HD CONTROLLER		
AT 30	AT MFM		110
AT 30	FD/HD CONTROLLER		
AT 30	AT RLL		114
AKHTER	MDM 2400 PC CARD MODEM		
	V20/V23, V22, V22bis (inc software)		135

**MDM 2400**  
**PC CARD MODEM**  
**£135** INCLUDING  
SOFTWARE

AMSTRAD	FX 9400T FAX MACHINE	529
AKHTER	FAX SWITCH	
	AUTO SWITCHES CALLS TO FAX OR PHONE	59
DF-NET-300	ETHERNET CARD	
	Novell/Net-Net compatible	143
XT 86-8mhz	MOTHERBOARD ntl RAM	69
AT 286-16mhz	MOTHERBOARD ntl RAM	199
AT 386-16mhz	MOTHERBOARD ntl RAM	549
PC/XT CASE	FULL SIZE XT CASE	55
PC/AT CASE	BABY SIZE AT CASE	73
XT-PSU	150W (full approvals)	78
KEYBOARD 84	84 KEY UK LAYOUT XT	41
KEYBOARD 102	102 KEY UK LAYOUT XT/AT	52
576K RAM CARD	- XT	
2mb EMS RAM CARD	- specify XT or AT	
DMS200 SERIAL MOUSE	- Includes DR HALO III software	38
XT MULTI I/O CARD	(RS232/printer/clock/floppy controller)	54
AT I/O CARD	(RS232/printer)	54
XT RS232 CARD		19
AKHTER 250W U.P.S.		199
RAM CHIPS/CO-PROCESSORS	- CALL FOR PRICES OF DRAMS, SIP'S & SIMMS.	
	THIS IS ONLY A SMALL SELECTION OF OUR HARDWARE RANGE - CALL FOR DETAILS	

# Technology Centre

HOLE HOUSE FARM, BURNLEY RD, CLIVIGER, LANCS, BB11 3RF

Tel. & Fax: 0282 831900 (24 HOURS)





## SCHOOLYARD TALK

Gordon Fyfe (no, nothing to do with the banana company) wrote to ask how many STs have been sold to date. "My friends at school keep telling me that the Amiga has sold more. Is that true?"

No it isn't, Gordon, not by a long chalk. Not by a long chalk and a half, even.

In fact, the ST is well ahead, and likely to remain so for some considerable time - not least because of Atari's planned price cut of £100, which takes effect in April. (It's not exactly a price cut, since it involves cutting the bundled software, but in any case it should help boost sales a lot.)

Atari insists that the total number of STs sold in the UK to date is in excess of 250,000. I understand that 100,000 were sold in the UK alone last year. (Incidentally, more STs are sold in the UK than in any other European country, with the sole exception of West Germany, where the total last year was more than 150,000 sales). The Amiga, on the other hand, has yet to pass the 200,000 mark. So there.

## OFF THE SHELF

Kuma has just released an upgrade of the best-selling K-Spread spreadsheet program. The new version, wittily and at the same time pithily entitled K-Spread 4, features macro support, 200 statistical data management, arithmetic and conditional functions and improved access to graphing and page layout.

GDOS is included in the package to enable users to perform sideways printing. A printer driver is available separately for the Atari laser printer. K-Spread 4, which costs £130, is available from Kuma on 0734 844335.

Can you remember that ridiculous contraption Clive Sinclair launched all those years ago called the C5? Sort of a sheltered bicycle, apparently designed to give passing lorries something to aim for when turning left?

Well, this is nothing to do with the C5. But HiSoft has released Lattice C Version 5 (C5, geddit?), which is kind of odd, since as I recall the last release was version 3. There are a whole heap of improvements, too numerous to mention

here, and the program is available from HiSoft on 0525 718181 for £99.95. If you already have version 3, an upgrade will cost you a mere £59.

What is more, the latest release is the already heavily-populated CAD market is Abacus' Becker CAD, a complex but extremely well implemented three-disk package that is PostScript compatible. And so it should be, at £229. Phone Abacus on 0706 524304.

## NOW IT'S STAKESPEARE

Did you know William Shakespeare's greatest hits are now available on ST disks? Did you, huh?

A company called, for reasons that I think should be obvious, Complete Works Publishing, has produced some of the immortal bard's best gear on 1st Word format on three disks, each priced at £6.95. That lot gives you nine plays, including *Julius Caesar*, *Richard III*, *The Tempest*, *Hamlet* and *Macbeth*, with the rest to follow - they have waited 400 years, another few months won't hurt.

Next up for the ST treatment are those perennial favourites Oscar Wilde, William Blake and William Wordsworth. Further information from Complete Works Publishing on 0403 86438.

## CHEAP AT THE PRICE

Should you happen to have £1,625 about your person that you've no particular use for, you could do worse than parting with it in exchange for the poetically-named LRZ650, the latest laser printer for the ST from the very strangely entitled Mekon Computer Products Ltd. (If that name inspires you with confidence you're easily inspired).

The new machine it is said, at 1.3 square feet, is to have the smallest footprint (ie, the room it takes up on your desk) of any such device available. The LRZ650 has two paper hoppers, a claimed printing speed of six pages per minute, 4.5Mb memory, and five printer emulations as standard - including HP LaserJet II, Epson FX80 and IBM Proprinter. Further details from those Mekons on 021-766 6886.

Additionally, Software Express has released Cricit Bar Code Plus, a bar code reader, integrated cash register and inventory control system that enables you to carry out such operations as sales, adding, deleting, editing and viewing stock by scanning that curious collection of thick and thin lines you find on just about everything you buy.

This, of course, is unlikely to have too many of you jumping up and down with excitement ('Great, I can read bar codes! Quick, pass the phone'), but it does indicate how the ST is continuing its steady advance into what sometimes gets called 'productivity markets.' I prefer to call it simply 'serious software.'

Cricit Bar Code Plus comes as a complete system including an ST and a monitor, printer and software. Hence prizes start at just this side of a grand (now you

## ON THE STREETS

Despite front page headlines in a computer magazine (not Express, I need hardly add), Ocean has of course secured the rights to *Robocop II* as everyone always expected it would.

Indeed software development manager at Ocean, Gary Bracey, has said that the company has been working hard on the game for going on two months already!

In addition, things

continue to look up for the beleaguered upgrade, the STE, with news that Digital Integration is to release a special STE compatible version of *F-16 Combat Pilot*.

And in case you missed it, Dirk Brzesinski, Peter Karl and Markus Hess, the three young German men accused of breaking into computer systems and selling secrets to the KGB recently

received suspended sentences of between 12 and 14 months each.

The trial over, and a figure of DM90,000 (about £34,000) put to the takings, German television went on to bring to the light of day the kit that had been confiscated from the undercover operation.

And guess what the men had been using with their modems and so on? That's right: an ST.

know why it's called serious software). On the off-chance this could be just what you're after, phone the good people at Software Express on 021-643 9100.

## A POORLY DISGUISED PLUG

Young Bob Crossley, 16, of Swindon wants to know if the ST is any good at animation, and if so what the best program is. Since Bob is still at school and is therefore unlikely to have made his first million yet, I can suggest nothing better to him than to purchase the very latest issue of *ST Format*.

For, on the cover disk of that magazine will find ANI.ST, a program I've mentioned several times in this column. It's a very highly rated animation program that used to cost £80 until very recently,

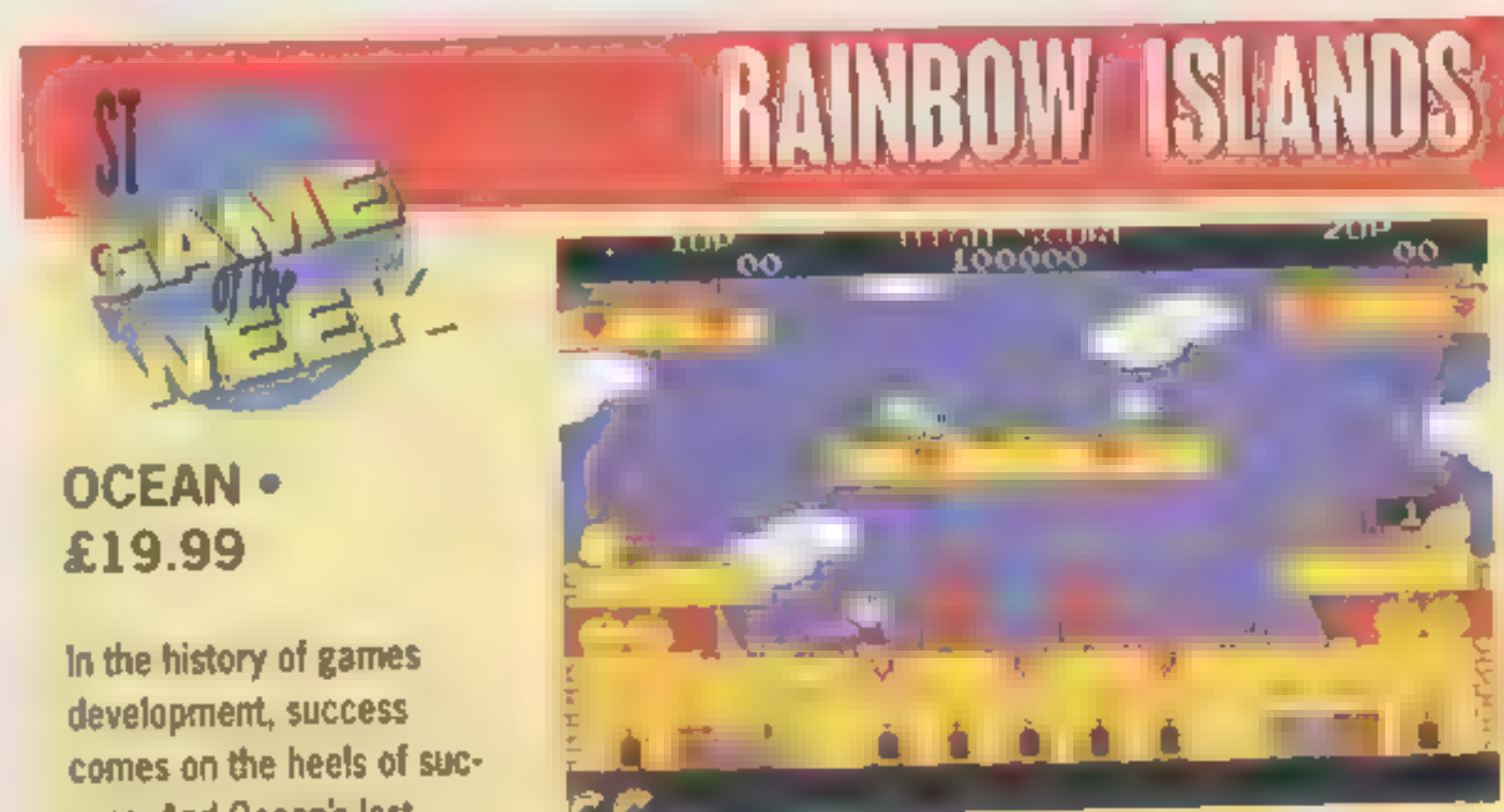
when its author retrieved the rights and put it in the public domain.

Furthermore, inside *ST Format* there's even a tutorial that should help you to get started, Bob! This (and so much more) for a mere £2.95 - such remarkable value. Thank you and good night.

## SOUNDS FASCINATING

Word has reached me that more than one company is working on a device to record sound directly to hard disk. The theory is that you use the ST as a very high-quality digital recording machine with accurate editing facilities. It's an idea that's been around for some time, but its appearance on the comparatively cheap ST would be a great boost.

Steve Carey



## OCEAN • £19.99

In the history of games development, success comes on the heels of success. And Ocean's last cutesy game was *New Zealand Story* which climbed all the way up to the top of the charts.

*Rainbow Islands*, the follow-up to *Bubble Bobble*, is also cutesy even though it has something of a complicated licensing background. Indeed, the computer conversion licence for *Rainbow Islands* started life under MicroProse's name, but after a legal wrangle with Taito - the coin-op company behind the arcade version - Ocean ended up scooping the licence.

And what a scoop! *Rainbow Islands* was a mega-hit in the arcades, and the computer version looks to follow.

The heroes of the game are Bub and Bob and they must progress through seven stages that masquer-

ade as seven different islands. On each island there are platforms, and Bub and Bob must gain the top of each platform.

To scale the platforms you can leap up to ledges but your best option is to fire rainbows into the sky. You can then scamper up these rainbows. As you learn to anticipate the game, you can fire rainbows and climb up at quite some rate.

Your potential for amassing a large score in the shape of collectable fruit is astounding. Not only is fruit scattered across most platforms but thousands of points can be found when you reach the goal.

But life isn't all a bed of jumpsuits and clod-hoppers: the island is positively hopping with insects and

other offending creatures. Dodging them while trying to complete the platform adds that little extra to the game.

The first few levels are no problem, but once these have been mastered, the game starts to become difficult. Fortunately, rainbows come in handy. You can kill creatures by firing rainbows at them. Alternatively, if the creature gets caught in the loop under the rainbow, it stays stuck until the rainbow disintegrates.

With graphics downloaded from the arcade version and with superb playability, no sacrifices have been made in converting *Rainbow Islands*. As a result, you end up with a game that is certain to ride the charts skyward.

Mark Higham

## PLAYING TIP

## CHAOS STRIKES BACK

If you bought *Chaos Strikes Back* at Christmas and still haven't completed it, here's a tip:

There is a secret armour room which you can reach by walking through part of the wall in the armoured worm room where your quest begins.



# TAKE OFF WITH AKHTER

CALL US ON (0279)411111



## 286 SPECIAL OFFER

- 80286 processor operating at 12MHz
- 1Mbyte RAM expandable to 4Mb
- 40Mbyte 25 Millisecond fast hard drive
- 14inch colour VGA monitor
- Microsoft compatible mouse
- MS-DOS 4.01 and windows 286

ONLY

**£1395.00**

# AKHTER

AKHTER  
COMPUTERS  
LIMITED

## 386 SPECIAL OFFER

- 80386 processor operating at 20MHz
- 1Mbyte RAM expandable to 8Mbyte
- 40Mbyte 25 Milliseconds fast hard drive
- 14inch colour VGA monitor
- Microsoft compatible mouse
- MS-DOS 4.01 and Windows 386

ONLY

**£1795.00**

**12 MONTH FREE ONSITE WARRANTY  
GUARANTEED 8 HOUR CALL OUT**

### HOW TO ORDER

Our telephone lines are open between 9:00am until 6:00pm Monday to Friday. Our telesales team are qualified to answer questions on our products. If you need more in-depth information our technical support team will be on hand.

For more information on all our product ranges contact us now for your full colour Akhter catalogue and price list on our SALES HOTLINE number (0279) 411111.

### ATTENTION EDUCATION SECTOR

Discounts are available to the Education Sector. Contact our Educational Division for prices and product information.





## INTO THE UNKNOWN

The universe is, and always has been an interesting place. For thousands of years man has gazed in awe up into the heavens at the endless reaches of space. Now you and your Amiga can explore the universe with the release of *Distant Suns*, which comes from HB Marketing and Virtual Realities Laboratories.

*Distant Suns* is the follow up to that hugely-underrated package *Galileo*. The program provides one feature that astronomers hitherto could only dream about – the ability to view the night sky at any time in history (well, 8000 BC to 12000 AD is your limit), from any point on the globe.

The program contains 2,200 stars, 450 deep sky objects in an authentic, astronomically-correct sky. If this wasn't enough, the American producers even supply an expansion disk to add a further 9,100 stars to the program.

*Distant Suns* is available from HB Marketing, the good people who can be contacted on 0895 444433.

## A1000 SAVIOUR

With the impending release of both Kickstart 1.4 and the Enhanced Chip Set, it seems that Commodore has forgotten A1000 users. Thankfully, third party developers have not.

One company in particular that A1000 users have to thank is Delaware Valley Software, who are soon to start shipping a board that will breathe new life into Commodore's original (and arguably the best) Amiga.

The Delaware Wonder Card is a very clever little device, indeed. It slots in as a replacement to the Kickstart daughter-board inside the A1000. This board then allows the Amiga 1000 to use both the ECS and Kickstart 1.4 (ROM-based).

Not only that, but once the ECS is installed, the A1000 can access all the new ECS screen modes and has the ability to use up to a megabyte of chip RAM.

Optional extras include a battery backed clock, an audio filter switch and the ability to software select between 1.2, 1.3 and 1.4 of the Amiga OS. How can an A1000 owner live without such a device? (My A1000 is going to get one as soon as they are available over here in dear old Blighty!)

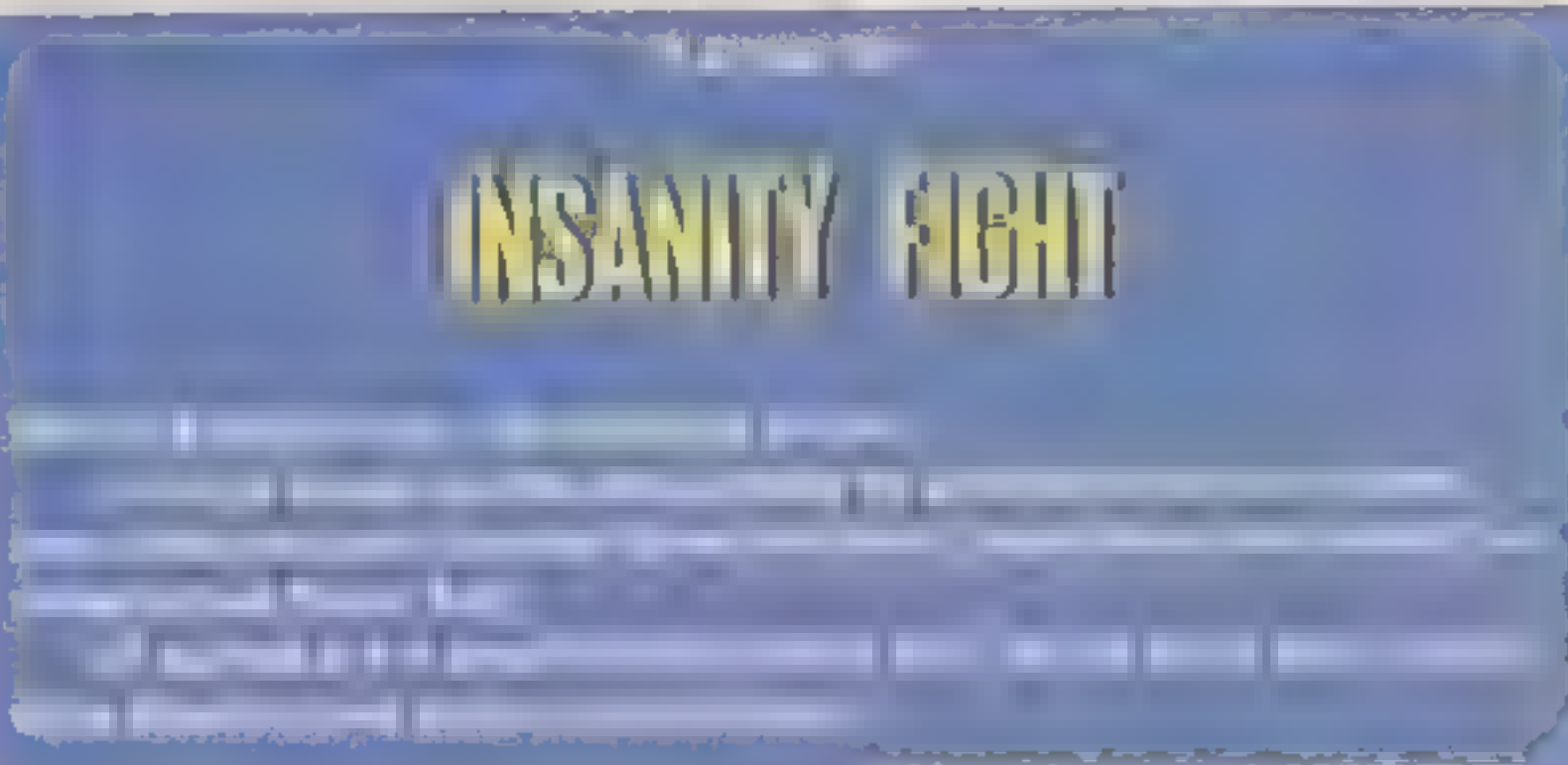
Needless to say, as soon as it is available I will review this wondrous piece of hardware. Until then, Delaware can be contacted on 0101 215 446 9227.

## TRACKERBALLS UP

Ever wanted an alternative to your mouse? What you need is a trackerball.

Until now there has been a rather surprising gap in the Amiga trackerball market. However, after many years of waiting, the Amiga is soon to gain not one, but two of the blighters.

Trackerballs have many advantages over the mouse. For one, unlike a



mouse, a trackerball requires no space for movement, which is essential if you're a musician. The use of a trackerball can also enhance many games. Most obvious among these is Electronic Arts' excellent *Marble Madness* (still, after these years, one of my favourites), which was originally designed around the trackerball.

First up is the FT-100 from HB Marketing, originally developed for use on the PC. This rather nice looking unit sits snugly at the side of your keyboard, and provides three control buttons that replace both mouse buttons.

The FT-100 also includes a very nifty latching mechanism, which (once selected) allows the left mouse button to be set as if it is effectively held down

permanently – another click of the button and the latch is turned off. This feature can be particularly useful when working with the Workbench, as windows can be resized and dragged with ease.

Next up is the old Atari favourite from Hard Edge Communications. This unit has been available for the Atari ST for just over a year now and has gone down relatively well among Atari owners. Although Hard Edge's unit can also be utilized as a mouse replacement, it comes into its own when used with games software.

For more information about either of these units, contact either HB Marketing on 0895 444433 or Hard Edge Communications on 0742 665719.

Jason Holborn

## DESIGNER SOFTWARE

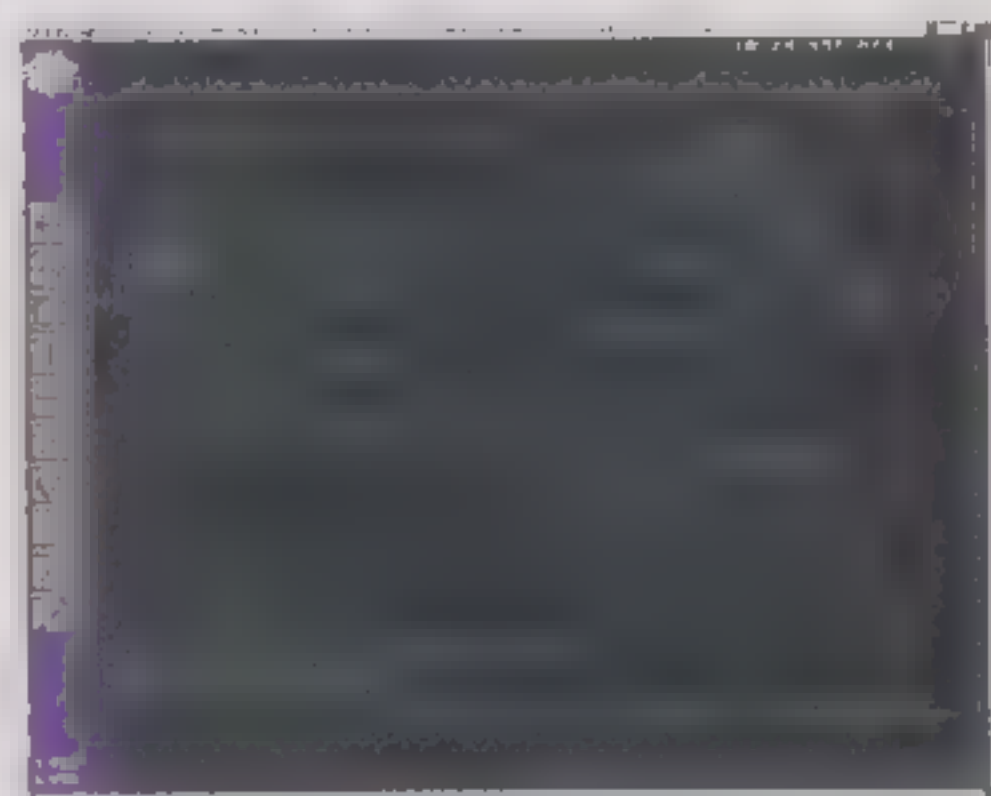
The world of CAD is a tough nut to crack for low-end machines. While the Atari ST has failed completely to be taken seriously as a contender in the CAD market, the Amiga is doing rather nicely, thank you.

This success can be attributed to a software package that has single-handedly done more to promote the Amiga as a professional CAD workstation – CADVisions' X-CAD Professional.

Following on from the Amiga philosophy of 'power without the price' (OK, so Atari coined the expression, but it's more suited to the Amiga anyway), X-CAD provided true CAD workstation power without a CAD workstation price.

Even in its first release, X-CAD managed to leave the competition for dead on both the Amiga and on its nearest CAD rival, the PC. With a redraw rate that was eight times faster than AutoCAD running on a 386 PC, X-CAD took the Amiga CAD world by storm.

Latest arrival on the Amiga CAD scene is *UltraDesign*, from Progressive Peripherals Software (the company responsible for PIXmate and the Marcam Frame Grabber). *UltraDesign* is a professional CAD system designed to run on all 1Mb



• *UltraDesign*: goes farther than the rest

Amigas and it provides many advanced features to suit the needs of even the most demanding of designers.

Features include drawing tools for multiple lines, arrowheads, arcs, ellipses & boxes, automatic line generation, razor lines, rubber banding and fillets. Text support includes 18 fonts with user-definable size, aspect ratio and slant, text rotation, reversing, flipping, inverting, editing and styling. If things start to slow down when a large number of text characters onscreen, *UltraDesign* includes a custom QTEXT module that turbocharges text rendering.

Layers are all important within a CAD system, and thankfully *UltraDesign* certainly isn't starved of features to handle them. For starters, up to 65,535 different

layers can be defined (which should be more than enough for most).

Layers can be added, deleted, renamed, merged, coloured, etc. Other features include linear units, precision drawing tools, extensive object manipulation (copy, move, scale, rotate, etc), hatching and filling.

This is where most CAD systems would stop, but *UltraDesign* goes on. Most important is the ability to directly read and write AutoCAD DXF drawings as well as Aegis Draw, IntroCAD, HPGL and DXY files. Drawings can be pasted up and printed using either standard preference printers or, for the highest possible output resolution, in Postscript format (both normal and encapsulated).

*UltraDesign* is handled by Marcam Limited: phone 01-941 6117.

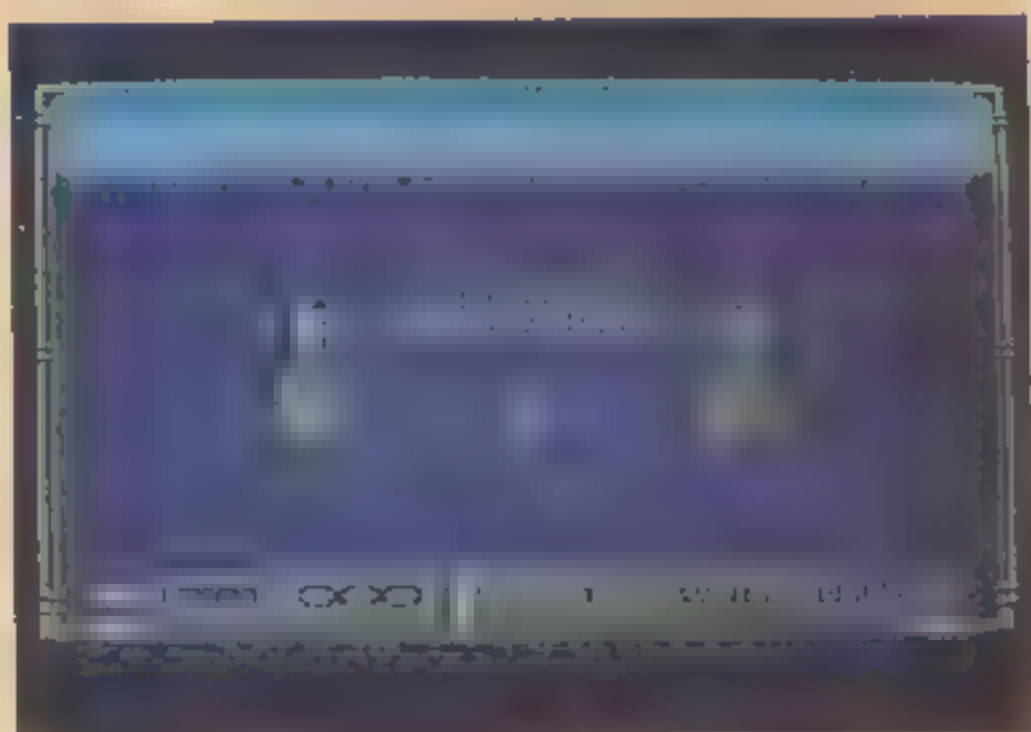
## AMIGA GAME OF THE WEEK TYPHOON THOMPSON

Domark • £24.99

Every so often, a game appears that is so silly that it screams for attention. *Typhoon Thompson* is one such game.

The plot is serious enough, revolving around a lost passenger starship last seen near the planet Aguar. Reconnaissance missions have revealed that the only survivor is a toddler, who is now being held captive by the mischievous sea sprites.

You play the heroic *Typhoon Thompson*, a somewhat reluctant hero who has been pressured into taking the mission to rescue the child. To do so, you must shoot the sprites out of their hovering flyers and collect them from the water before they can swim back to their islands. Once all the sprites from a village have been caught, they can be traded for one of the four artifacts



needed to release the baby.

You are not completely alone however, since the planet Aguar has a strange race known as the Spirit Guardians, who look after the good and helpless. They revere the 'Sea-Child' (as they call the baby) and offer you magic to help you defeat the sprites.

The Aguarians supply you with the ability to regenerate your dead body a limited number of times as well as giving you additional weapons for use when the sprites become more difficult to defeat.

Throughout the game, *Typhoon Thompson* gets into

humorous situations. The captain of the rescue mission doesn't take kindly to Thompson trying to chicken out of the quest, and the sprites get into rather a strop when you win!

Add to the entertaining animations and humour some simple, but involving, gameplay and you come up with a deceptively-playable and infuriatingly-addictive cartoon action number in a similar vein to many of those scintillating early Broderbund classics.

In the final analysis then *Typhoon Thompson* is not to be missed!

Maff Evans



# Dowling

MAIL ORDER DIVISION

# COMPUTERS

**HEAD OFFICE:**

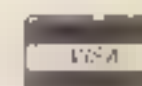
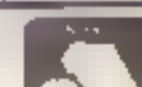
Unit 48

Tyne Road

Sandy, Beds, SG19 1RB

Tel: 0767 81750/60

Fax: 0767 81730



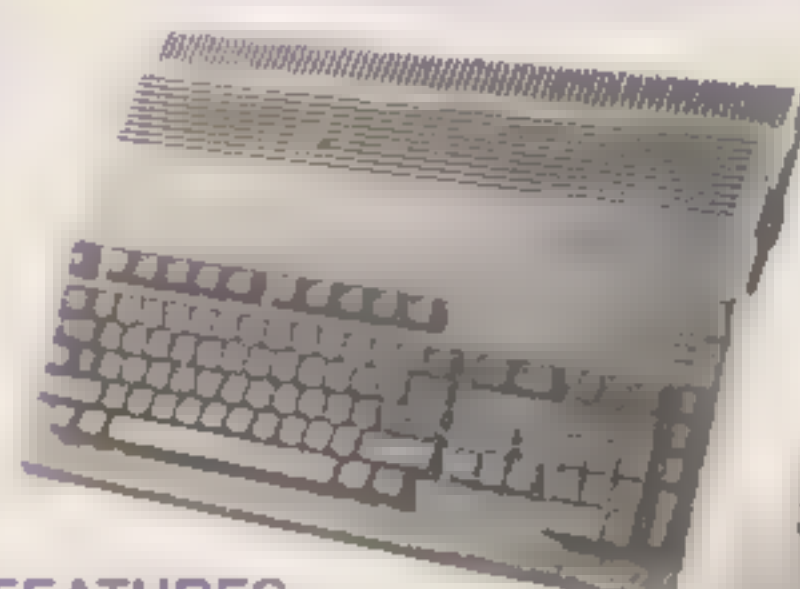
**ALL PRICES INC VAT PLUS A FULL 1 YEAR GUARANTEE**



## AMIGA COMPUTERS & ACCESSORIES

FULL 1 YEAR GUARANTEE	RRP	OUR PRICE
AMIGA 500 + Mouse, modulator, Workbench 1.3, manuals etc	£379.99	£339.99
AMIGA 500 BATMAN PACK, inc DPaint II, Batman the Movie, etc	£399.99	£349.99
AMIGA 500 BUSINESS PACK, inc Protext, Superbase & Maxiplan	£679.99	£449.99
AMIGA 500 CLASS OF THE 90'S PACK, inc Publishers Choice, BBC Emulator	£573.85	£499.99
DOWLING AMIGA PLUS PACK - available only with above		
TENSTAR Games Pack + 10 3 1/2" disks	£249.99	£39.99
mouse mat + Dustcover + Joystick	£309.99	£244.99
CBM1084S Stereo Colour monitor	£89.99	£79.99
CUMANA 1 meg quality drive - The Best!	£69.95	£59.95
AMIGA 500 Power Supply Unit	£24.99	£19.99
AMIGA A520 TV Modulator		

## THE MEGABOARD RAM EXPANSION 500



UP-GRADES  
YOUR  
AMIGA A500  
FROM  
512K  
TO 1  
MEGABYTE!

### FEATURES

- Only top quality components used
- Real Time clock with NICAD battery backup
- Memory disable switch to revert back to original 512K
- 12 months guarantee. Fully tested prior to despatch

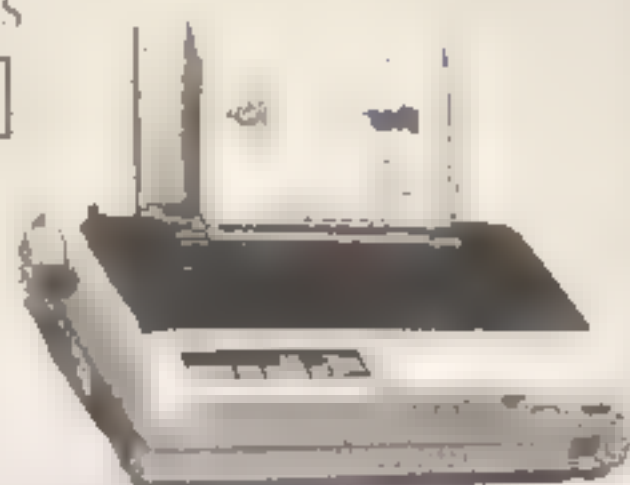
Purpose designed for the

**AMIGA A500**

**ONLY  
£59.95**

**Star**  
COMPUTER PRINTERS

= Registered Dealer =



Being Star registered dealers we only sell official UK machines which come with a full 1 year guarantee. Beware of inferior imported products

OFFICIAL U.K VERSIONS	RRP	OUR PRICE
STAR LC10 mono 144/36 C.P.S	£229.95	£149.95
STAR LC10 II 25% faster version	£263.35	£169.95
STAR LC10 Colour, 7 colours	£297.85	£189.95
STAR LC24-10- 24 pin multifont	£343.85	£229.95
STAR LC10 Sheet Feeder (auto)	£74.75	£49.95
STAR LC10 Mono Ribbons	£5.95	£3.95
STAR LC10 Colour Ribbons	£7.95	£5.95
STAR LC24-10 Ribbons	£7.95	£5.95
STAR LC10 Quality Dust Cover	£7.95	£5.95

## ★ 3 1/2" DISKS ★ 3 1/2" DISKS★ ★ 3 1/2" DISKS ★

All our disks are of the highest quality, are 100% certified and have 'made in Japan' stamped on each disk. We guarantee each disk is either Sony, TDK or JVC unbranded.

50	£29.99
100	£57.99
200	£99.99
400	£179.99
Roll of 1000 labels	£9.99

## ART, BUSINESS AND MUSIC PACKAGES FOR THE AMIGA 500

FOR THE MORE DISCERNING COMPUTER USER	RRP	OUR PRICE
<b>ART</b>		
Photon Paint II	£69.95	£29.99
Deluxe Paint II	£49.95	£9.99
Vidi- Amiga	£99.95	£89.95
<b>BUSINESS</b>		
Kindwords version 2	£99.95	£49.95
Superbase 2	£99.95	£49.95
Maxiplan Spreadsheet	£99.95	£49.95
<b>MUSIC</b>		
Aegis Sonix version 2.0	£69.99	£34.99
Music - x 'state of the art music package'	£229.95	£149.99

## NEW - CLASS OF THE 90's UPGRADE PACK

### PACK COMPRISES OF THE FOLLOWING:-

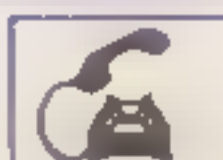
Midi Master Interface (£34.99), DPaint II (£49.95), Publisher's Choice (£99.95), Maxiplan 500 (£99.95), Superbase Personal (£59.95), Dr T's Recording Studio (£49.95), BBC Software Emulator (£49.95), Amiga Logo (£82.00), Mouse Mat (£4.39), 10 Blank Disks (£9.99), 1 years subscription to Amiga User (£23.00).

RRP £564.07 OUR PRICE £199.99

## ★ THIS MONTH'S SOFTWARE BARGAINS FOR THE AMIGA 500★

HURRY - LIMITED STOCKS	RRP	OUR PRICE
Batman The Movie	£24.99	£6.99
F18 Interceptor	£24.99	£6.99
New Zealand Story	£24.99	£6.99

**ORDERING  
MADE EASY**



Order by phone by  
calling our Head Office  
quoting your Access/Visa Number



Order by Post - make Cheques, Building  
Society Drafts or Postal Orders payable  
to Dowling Computers

Add £6.00 courier delivery for all orders over £100.00. Add £2 P&P for orders under £100.00.



# SPECTRUM

## MORE SAM

The Miles Gordon Technology SAM Coupé has only been out for a month or so and already it seems to be building up an enthusiastic base of owners, many of whom have written to me to praise the machine.

MGT isn't relaxing now that the machine is finally on to people's MFI Computer Workstations, either. The company has lots more complementary hardware ready for release.

One up-and-coming piece that has passed through design and manufacturing is a nifty 'add-on' box. MGT says this will allow third-party developers to use the SAM expansion connector.

Indeed, the first two products to make use of this box are available and ready to expand the Coupé's horizons. They're the SAM External Drive Interface, which includes a parallel printer port, and a Communications Interface.

Each of these products is available for the price of £34.50. Phone MGT on 0792 791100 for more details.

Staying with the SAM, a public spirited chap by the name of Graeme Robertson has been busily testing his extensive software collection, and he tells me the following titles are definitely compatible with the Coupé: *Manic Miner*, *Penetrator*, *Obliterator*, *New Zealand Story*, *Bosconian '87*, *Hacker 2*, *Dan Dare*, *Fantasy World Dizzy*, *Olli & Lissa 3*, *Intensity*, *Renegade 3*, *Last Duel*, *Olli & Lissa*, *Hotshot*, *Netherworld*, *Vindicators*, *Northstar*, *Chain Reaction*, *American Turbo King*, *Dynamic Duo*, *Vectorball*, *Captain Fizz*, *Aliens*, *Gun Runner*, *Space Harrier 2*, *Jumping Jack* and *Enlightenment - Druid II*.

Robin Alway

## THE COMPANY STRIKES BACK

If there's one software company that we Speccy owners hold dear to our hearts, and carry a picture of in our wallets, it's Hewson. Over the years this firm has produced a constant stream of highly-original and everlastingly-playable games.

This knack for brilliance has built the company a formidable reputation which is why 4th Dimension, a compilation of four previously unreleased Hewson games, is such a huge disappointment. The four games aren't completely useless, but by Hewson's previous record, look like budget fodder.

For more details and a full verdict purchase the next super soaraway issue of *Your Sinclair*, due in the shops on March 18 and, as it's now a future publication, you can purchase without feeling disloyal.

Incentive Software's *Driller* may be getting a little frayed around the edges nowadays but Robert J Baker, of London, is pretty sure a complete solution has yet to appear in print and so hoisted me over a fully comprehensive guide for finishing the thing once and for all.

However, owing to the cramped confines of this column and the shortage of mature Scandinavian pine forests at the moment, I find myself unable to include the whole darned playing guide in its entirety. Instead, here are Robert's Multiface pokes for the game plus the solution to the very last sector. Robert's reward for this mammoth feat of tipping is a free budget game.

48246,0 Infinite shield  
47926,0 plus 49022,0 and 49425,0 Infinite energy  
47896,0 Infinite time

There are seven switches in *Trachyte*; the five in the frame before you plus one in the floor and a proximity switch which detects your movements. Move until the left middle and bottom switches are showing, then switch to Attack Mode and shoot in the following order: bottom, middle, right, floor. Do this correctly and the frame disappears.

Having done that, you have a force field to get through. It has a blind spot; drive along X=6282. The 18th rig can, in fact, be placed in any sector but only in *Trachyte* will you get the end game sequence in all its glory. The drilling point is 4103,6559 facing the rear wall.

## MORE GOLD

Not content to lie back and count the mounds of gold from its CD Games Pack venture, CodeMasters is working hard to keep up its traditional business of churning out well-programmed budget games with dodgy titles.

*Super Dragon Slayer* is the latest result of the CodeMasters' budget-game-dodgy-title-devising department and - unusually for a cheapo - offers multi-load levels and a choice of games.

Disappointingly though, the gameplay is decidedly run-of-the-mill stuff and basically entails guiding the rather weedy looking hero of the piece through four 'magical wastelands'. Naturally, each level is thick with monster types that need lightning bolts between the eyes.

You can also pick up spell books and there are a total of five different types of spells to cast, but in the end it boils down to a wholly-unsatisfying experience with colour clash approaching psychedelic levels.

Much better in my opinion is another new CodeMaster's release - *Italian Super Car*. This is a plan-view driving game with an original concept, and it is not often you see one of those.

The object is to race your Italian sports car through minefields, past other cars and over the jumps all found on a film set. There's also a tight time limit and you've only got three takes in which to complete each scene.

The graphics are functional rather than snazzy, but it's good fun to play and I'll admit to a minor bout of addiction. All in all, more fun than owning a Reliant Robin and, at £2.99, cheaper.

# PCW

## BURNS UNIT

Recently a lot of PCW owners have been worried about leaving their machines on for long periods of time. This is actually what you ought to do - switching the unit on and off repeatedly doesn't do the electronics much good because of the constant surges of power.

Good PCW practice dictates that you switch the thing on in the morning and off at night, without worrying about stretches of a few hours in between when it's not used (it only consumes as much power as a light bulb).

However, leaving the screen on can cause damage after very long periods. Look at a monitor on a BR platform and you'll see constantly displayed phrases 'burned in' to the screen permanently in black (phrases such as 'We apologise for the delay of this train', etc).

There isn't much you can do about this in *LocoScript*, but if you work in CP/M this BASIC listing will blank the screen until the next key press. Save it as BLANK and to blank the screen type:

```
BASIC BLANK[RETURN]
10 OUT 248,8 : AS=INPUT$(1)
20 OUT 248,7 : SYSTEM
```

## A TIP THAT COUNTS

Man has an obsession with numbering things: Ten Commandments, Seven Steps to Heaven, Birmingham Six, Fabulous Four, Fifth Dimension, Chiltern Hundreds, etc. And in case you haven't guessed, you can have *LocoMail* number things for you automatically - ideal for references or lists of items.

At the beginning put the command (+Mail) F=0 (-Mail). Then every time you want a number put (+Mail) +F (-Mail), adding (+R.1) (+Super) before and (-Bold) (-Super) after if you want them to appear as superscripts.

'Fill' the completed document and *LocoMail* numbers the +Fs in sequence. So no mistakes caused by your missing out a reference or putting the same thing twice or misnumbering; and no problem if you realise you've missed one out. Just insert another +F at the appropriate point and re-fill.

## B+, C?

English composer William Walton was once held up for eight months while writing his oratorio *Belshazzar's Feast* because he couldn't decide what note should go with the word 'gold'. And he never had a PCW.

The astonishing music package *The Composer's Pen* - which lets you prepare and print out musical scores to professional standard very quickly and easily, unless you get stuck on words like 'gold' - is now available in a version that takes full advantage of those lucky enough to own 24-pin printers. So now you can be sharp, see? (Actually B sharp is not C, strictly, but they are enharmonically equivalent). Details from Composit, that can be reached on 021-456 1967.

## PATHETIC JOKE!

Been watching *A Sense of Guilt* on the BBC recently? Unfaithful old rascal Felix, played by Trevor Eve, has a PCW. Perhaps this is something to do with a CAD package. What do you think?

Rob Ainsley

# MSX

## A FOREIGN AFFAIR

I have been lucky enough to purchase a copy (second-hand) of *Turbo 5000*, the Universal Cartridge for the MSX 1 and 2 computers, and I thought that you might be interested to learn about some of its more useful features.

This device is on ROM, and was originally distributed in the UK by Robtek of Holland, although it seems that it is no longer available here, apart from second-hand that is - so a trip to the continent may be needed if you wish to purchase this device.

To use the cartridge, slot it into one of the MSX cartridge ports, turn on the power, and a brief message tells you that it is resident in memory. Function key 2 enables you to Call Turbo, after which a menu will appear, and you can access some of the many functions of this cartridge.

Firstly, you can make a hardcopy of all active screens 0 to 8 and use any MSX, Epson- or IBM-compatible printer to print out text screens 0 and 1.

Next, we have a Turbo Load feature, to speed up saving and loading. Tape to tape, tape to disk, and disk to disk backups can be made and along with a directory of programs - all addresses being displayed. Deleted disk files can be recovered just by loading the disk and typing in the file name.

*Turbo 5000* also has full disk handling routines and can read all hex and ASCII sectors including format info, boot sector and hidden files. MSX-DOS can be called up from the program, even if you do not start up with DOS.

As you can see, this device looks to be a useful piece of kit. The cartridge is supplied with a well-written manual and seems at first glance an easy device to use. If only life were that simple.

Even now I am still trying to get to grips with its features and I find that some programs will not back up, even using memory shifts, etc.

Perseverance, as always, is the order of the day with *Turbo 5000*, and eventually you will most likely find that it is a useful and capable device and well worth seeking out.

## STORMING LETTERS

I have had a flood of mail recently, some from MSX users requesting a list of MSX software retailers, and many cards replying to the competition in which I asked you to name the 12 games that Kixx produce for the MSX.

As many of you have already pointed out, there are, in fact, 13 Kixx games available, and 14 if you count the soon-to-be-released *Indiana Jones* and the *Last Crusade*.

Anyone who has already replied to this competition, never fear, if you have named 12 of the 14 titles you will be included in the draw.

The result of the competition will be published in two weeks' time, so if you want to enter, send in a card to Express pronto. There will be two winners.

The first prize is to be a copy of Sub Logic's *Flight Simulator* and *Torpedo Attack*, kindly donated by Capri Marketing of Marlowe, Bucks and the second prize will be US Gold's *Chicago '30s*, donated by yours truly.

Keith Neal



# CPC

## A TRIUMPH OF REASON

I've received a letter from Simon Lee, of Newcastle upon Tyne, who's got a few words to say about the 464 versus 6128 debate.

"I'm sure most CPC users have heard the phrase, 'My 6128's better than your 464', but really all we're doing is arguing among ourselves. Shouldn't we instead be 'united'? After all, we are all Amstrad users.

"But what would be the consequences of dropping the 464? Well, the 464 serves as a low-cost entry into the computer world, as not all of us can afford a 6128 straight away. If we didn't have this low-cost entry, surely the Spectrums and Commodores would take over - well, almost! The 6128 is, after all, slightly expensive.

"I'm glad that, over Christmas, Amstrad realised the potential of the CPC. But what on earth possessed Amstrad to advertise the Spectrum on television but the CPC in the press? I'm sure that the CPC is about a thousand years ahead of the Spectrum in terms of sound and graphics.

"Anyway, on the subject of the 464/6128 'divide'. What if Amstrad dropped the 6128? As most users know, the 6128 can be used for almost anything from running a small business to controlling a space station (well, on the same lines, anyway) and will continue to be used as it has excellent business software and word processors available for it. But to put it in simpler terms, the 464 needs the 6128 to survive and the 6128 needs the 464 to survive. In my opinion, anyway."

A very good point Simon. I think the two machines do need each other. Most unusual of all, though, is hearing from someone who rates both machines. Is it my imagination, or is there just a hint of snobbery about owning a 6128? You know where to write to.

Rod Lawton

## DOCTOR DOOM'S DAY

The time has come for all you comic-readers to come clean. No, I'm not talking about the blooming Beano, either. I mean proper comics, Marvel-style.

Marvel comics is the inspiration for the latest release from Empire. Called *Dr Doom's Revenge*, it features the exploits of a dynamic duo of a different nature. Captain America and Spiderman are our heroes, and they're up against the demonic Doctor Doom and his legions of heinous henchmen.

The plot is a simple one. Doctor Doom has made off with a horribly-destructive thermonuclear device, but Captain America and Spiderman have traced him to his castle headquarters. It's now

their job to break into the castle and destroy the doomsday weapon.

The game plays much like any other combat game. You control your superheroes as they punch, kick and otherwise duff up their opponents. There's quite a variety of moves available, however, as your actions have differing effects according to how far from your enemy you are.

Gameplay, then, doesn't sound the deepest you'll ever encounter. And it's not - but then *Dr Doom* has other attractions.

Chiefly, there's the wonderful sprites and animation. Empire has really captured the look of the comic-book heroes, including Captain America's gymnastics.



• *Dr Doom's Revenge*: excellent between-level screens and plenty of action.



# C64

## YOU BETTER YOU BET

Fancy winning a fortune on the football pools - trotting down to the local betting shop and finding the six horses that will transform themselves into a winning accumulator? Chance would be a fine thing then.

Still, there are companies around who are producing software for the C64 which is designed to help you achieve your goal of immense wealth. If the software was that good, surely the program designers would use it just the once and become instant millionaires?

Ours is not to reason why, ours is to write to Boxoft and acquire further details. It can be found residing at 65 Allans Meadow, Neston, South Wirral L64 9SQ.

## CHEAPER THAN EVER

Some of you may have been thinking of adding the Oceanic disk drive to your C64 system. Some of you may already have done so, but if it was for a brand new drive, then I'll be willing to bet (I seem to have betting on the brain this week) that you paid more than a round £104.95 for it.

That is the price being asked for by Microsnips, and included in that sum is postage and packing. The disk drives have a lot to recommend them, being smaller, faster and quieter than Commodore's own range of 5.25-inch drives. And, of course, they are cheaper.

For full details write to Microsnips at 37 Seaview Road, Wallasey, Merseyside L45 4QN. Or if you fancy a chat over the telephone, why not give them a call on 051-630 3013?

## A LITTLE COMMENTARY

Companies that acquire the rights to produce computer games based on the exploits of such legendary figures as Batman and Indiana Jones obviously have to recoup their financial outlay.

Companies that acquire the rights to produce C64 versions of popular coin-op games equally obviously have to do the same. Wouldn't it be nice (to coin a song) if we had original ideas for a fiver or less rather than what are sometimes pretty dodgy tie-ins and copies for a tenner or more? What do you think? Seen the awful *Beverly Hills Cop* yet?

## POKES FOR NOTHING

Players of *Turbo Out Run*, which is currently coining plenty of gold for its suppliers, can treat themselves to unlimited time on the disk version with the following cartridge pokes.

The pokes! For load 1, POKE 16034,173. For load 2, POKE 16035,173. For load 3, POKE 16034,173. Last, but not least, for load 4 you'll have to POKE 16035,173.

## GAME FOR ADVENTURE

Scapeghost from Level 9 seems to be going down well, so for a little ghostly help you might care to keep following Joe Danby, push the urn when you're strong enough in order to impress David Ridge, remember that Violent Conway is blind not deaf and recruit the Colonel by making the vandals think that there's a night watchman roaming about.

Pete Gerrard

# YOUR FORMAL

PC	10
ST	12
Amiga	14
Spectrum	16
PCW	16
MSX	16
CPC	17
C64	17
Atari XE	18
QL	18
Archimedes	18
BBC	18





## ITALIAN QL USERS

There was an Italian QL users meeting that took place last September, but details have just now made it into the QUANTA newsletter.

SPEM Proprietor, Guido Masoero, announced a new hard disk system, similar to the Miracle unit. It's about seven times faster than a floppy disk.

Guiseppe Zanetti has developed a DTP program, claimed to be powerful and suitable for unexpanded machines.

Romaldo Parodi showed his expansion card, giving an additional 192K of EPROM/RAM, with battery back-up for the RAM. It can be used in conjunction with a 512K RAM expansion. Programs can be stored in the RAM, avoiding the need for an EPROM programmer.

Roberto Innocenti has discovered a way to get more colours (up to 32), without stippling, in Mode 4!

Augusto Delsante demonstrated his QL film animation program. Using the SPEM video digitiser to capture images stored on a VCR, he is able to animate them at 25 frames per second - TV speed. The program requires a 640K QL and about 10 sequences are available, lasting up to 3.5 seconds.

## QL PROLOG

Following the launch of the QL, Sinclair was very interested in putting PROLOG on it. PROLOG (PROgramming in LOGic) is the language often used for so-called

artificial intelligence applications like 'Expert Systems'.

The project never went ahead, but Hans Lub, of Utrecht in Holland, has developed his own version of a PROLOG interpreter for the QL, based on the standard implementation.

He wrote most of the interpreter in C, with the critical portion matching questions against rules and facts, and coded in assembly language to create the maximum speed.

John Torofex

## QUANTA SUBGROUPS

QUANTA, the QL user group, has spawned a number of local subgroups, information about which I've published from time to time. Here is the latest listing that includes several new ones. You don't have to belong to QUANTA to join one of these groups.

Berks, Alex Waye, 0235 833284  
Birmingham, Bedford White, 021-708 2560  
Bristol, Chris Gregory, 0272 513653  
Bucks, Alex Waye, 0235 833284  
Devon, Roy Johnson, 0395 275290  
East Anglia, George Katsoulis, 0842 753843  
Essex, Trevor Watson, 01-592 5928  
Leicester, Peter Ash, 0533 766857  
Merseyside, Don James, 051-652 7366  
Mid-Anglia, Peter Rowell, 0954 210692  
Mid-Cheshire, Alex Robertson, 0270 500565  
Northampton, Terry Harman, 0604 842875  
Oxon, Alex Waye, 0235 833284  
Solent, Graham Evans, 042121 3350  
Wilts, Alex Waye, 0235 833284



## SOUNDING OFF

BBCs have long been used by semi-professionals, musicians and educationalists as musical tools, partly, of course, because of their cheapness, availability and excellent interfaces. Much of the credit, however, must go to Ample, a full-featured music programming language pioneered by Hybrid Technology.

As a standard in its own right, many programs exist that take advantage of Ample's basic structure to transform the musical output of your BBC. One such is Basic Music Composition from Tobin Music. Derived from the Tobin Music System, a well-known musical literacy course developed over the last 25 years, Basic Music Composition is intended to teach good habits from an early age.

This reviewer is, unfortunately, too old for many new good habits, but I was certainly pleased to discover even my feeble efforts made tuneful by the program. There is the nub of the issue - it won't let you make 'mistakes', but at the same time does not limit your creativity, either.

In a classroom, used as part of the curriculum, this approach is ideal, but it may not suit the budding Beethovens among you. Overall Basic Music Composition is a workmanlike, if unspectacular, package that includes everything needed in the classroom, including Econet and Music 5000 system compatibility. And that is it for the moment, fur-

ther thoughts will follow if (and when) Music 5000 Universal becomes available for review.

## A PEAK OF THE DECADE

Most exciting news of the decade (so far) for BBC games fans, and, let's face it, that means everyone, is the impending conversion of Sim City, the mega game from Infogrames.

For those who don't read the games magazines, Sim City gives you the chance to play at being city fathers (or mothers). You must build up your city from humble beginnings, building roads and hospitals and overcoming disasters both natural and man-made.

The great strength of Sim City is in its graphical interface - so it will be fascinating to see if Superior Software's wizard programmer, Peter Scott, can pull off the feat by recreating it on the BBC. Don't hold your breath though, as summer is likely to arrive before Sim City.

Much nearer completion is the conversion of Hostages, another Infogrames classic. My knowledge of this is even sketchier than Sim City, but I do know that action and strategy are mixed up in this simulation/arcade game. Again, as Peter Scott is in charge of the coding and, knowing his legendary finishing speed, I expect to be reviewing the game in full within the next few weeks.

Superior deserves congratulations for forging links with such an illustrious software house from the 16-bit world. With Steve Hanson reporting an excellent working relationship, it could develop into something that lasts, too.

Andrew Brown



## ON THE AIR

I've spent a happy week exploring the arena of Atari 8-bit communications, huddled over a keyboard and modem with only the phosphorescent glow of the monitor to light the darkness. Let me whet your appetite with fruit of my labours - that is provide for you a description of the best BBS (bulletin board service) in the UK.

Comms - isn't that the domain of the 16-biters? That's what I thought until I discovered The City, an incredible bulletin board devoted to all things 8-bit.

A bulletin board is a computer version of the pin board you have at work or school. Users can call up the board, leave messages, exchange software and generally interact with other 8-biters.

The City is a BB based in Birmingham, run on and supporting the Atari 8-bit. Unlike most bulletin boards however, the layout and configuration of the The City is decided by its residents!

The City is organised just like a real city. When first you dial the board, you're given the status of visitor. You can have a look around, leave a message or two, but your actions are limited.

With resident status, the fun begins. Once a resident, you can create areas within the City and mould the BB to your own specification. You can rise from Resident through Guardian to Sentinel and the entire board will be laid bare to your excesses - more next time.

Meanwhile, for initiated comms users, enter The City, by phoning 021-353 5486, 8N1, V21/V23 24 hours per day.

Edmund Blake



## DOS TO RISCOS

Further to the file transfer feature in Express 68, I've recently seen the PCdir utility working on an Arc. This is a useful little routine as it gives you extra drive icons in the icon bar, labelled A:, B: and so on.

These icons can be clicked on like any other, but the drives will then read and write MS-DOS disks rather than Arc ones. With this utility you can transfer data to and from PC disks with ease and even copy files from one MS-DOS disk to another, though you can't currently format DOS disks on the Arc.

What a worthwhile utility, but only one of several on Careware disk 4 from Norwich Computer Services. Careware is akin to shareware, but £6 of the £7 cost is later donated to charity. Nice to think you can do something for a good cause while picking up worthwhile software at a decent price.

And nice to think there are enough philanthropic programmers out there to make the concept possible. Norwich Computer Services, which also publishes Archive, its user group newsletter, is on 0603 507057.

## GIVE US A HINT

In the geriatric but comfortably-off PC world a lot of fuss is being made about the DTP page description language PostScript and Adobe's Type 1 hinted fonts. Rival companies which also publish fonts maintain that Adobe's hinting is rubbish, anyway.

All Acorn's Arc fonts are hinted, as are several of the third-party fonts available, including The Font Foundry's mentioned last week (about which more next week).

What is hinting, anyway? When using scalable fonts the characters are produced from a series of mathematically-defined lines and curves.

As you scale the characters down, the lines of which they're composed get thinner and thinner. There comes a point when some lines will be so thin that they will disappear on a comparatively low resolution device like a laser printer. This is particularly true of serifs on fonts below 10 points in size.

Hinting forces any line thinner than a printed dot (one three hundredth of an inch on a typical laser) to be rounded up to one dot thickness. This ensures that parts of characters don't disappear and gives a better appearance to the characters, at the expense of true accuracy to the form of the character.

The other kind of hinting, which is related to the first, is to do with the place a given character falls on the matrix of dots in a printer.

There are occasions when, for instance, the two legs of an 'H' may fall unevenly within the matrix, so that one leg falls on a line of dots while another falls between two lines. This can lead to an uneven character form. Hinting ensures that all the legs or uprights of a character are printed with the same width.

Glad you asked?

Bertrum Carrot

## MODE WORKS

The way an Arc is configured, you might very well have come to think that there were only two screen modes available, numbered 12 and 15 (all right, and 21 if you've a multisync monitor). In fact, of course, there are quite a few more.

One of my own favourites is mode 17. This is particularly handy as you can display it on a standard Acorn-type monitor - though at the limit of its resolution. Mode 17 is 1,056 pixels horizontally by 256 vertically.

The big advantage is that you can display a lot more on the screen. The icon bar, for instance can take more application icons, and you can open more windows of usable size.

A friend of mine - the one who boots up with the 440 and all the trimmings - runs his Arc in this mode when using Acorn DTP. He can also keep a file directory open at the top of the screen for multi-tasking a text editor, art package or whatever.

This option runs with a full-page window in the DTP open. Ultimately, however, this manner of operating is only comfortable long term on a multisync, while ideal for desktop work on virtually any screen. Further, to change modes, run the Configure application or press [F12] and enter \*Configure WimpMode nn, where nn is the mode number.



# 520ST-FM SUPER PACK



**1Mb DISK DRIVE  
£450 OF SOFTWARE  
ARCADE GAMES**

Arkanoid II	Imagine	£19.95
Beyond The Ice Palace	Elite	£19.95
Black Lamp	Firebird	£19.95
Buggy Boy	Elite	£19.95
Chopper X	Mastertronic	£9.99
Ikari Warriors	Elite	£14.95
Marble Madness	Electronic Arts	£24.95
Quadrailen	Logotron	£19.95
Ranarama	Hewson Consultants	£19.95
Return To Genesis	Firebird	£19.95
Roadwars	Melbourne House	£19.95
Starquake	Mandarin	£19.95
Test Drive	Electronic Arts	£24.95
Thrust	Firebird	£9.95
Thundercats	Elite	£19.95
Wizball	Ocean	£19.95
Xenon	Melbourne House	£19.95
Zynaps	Hewson Consultants	£19.99

## SPORTS SIMULATIONS

Eddie Edwards Super Ski	Elite	£19.95
Seconds Out	Tynesoft	£19.95
Summer Olympiad '88	Tynesoft	£19.95

## PRODUCTIVITY SOFTWARE

Organiser	Triangle Publishing	£49.95
-----------	---------------------	--------

## JOYSTICK

Atari CX40 Joystick	Atari Corp	£4.99
---------------------	------------	-------

**FREE ATARI BUNDLE VALUE: £458.97**

**£399**

With SM124 mono monitor: £498 INC VAT With SC1224 colour monitor: £698 INC VAT

# 1040ST-FM PROFESSIONAL PACK

For the serious home user and the small business, we are pleased to announce a new package based around the 1040ST-FM. The 1040ST-FM has 1Mbyte RAM and a 1Mbyte built-in disk drive. In addition, the 1040ST-FM now comes with a TV modulator built-in. (The previously available 1040ST-F was designed for use with a monitor only and did not come with a modulator.) This modulator allows the 1040ST-F to be plugged directly into any domestic TV set, and comes complete with a lead to allow you to do so. The new 'Professional Pack' from Silica includes the new 1040ST-FM with modulator plus four high quality software packages including a spreadsheet, database, word processor and programming language. This 'Professional Pack' software will enable you to get straight down to business with your new computer. In addition to this software (worth £384.84), if you buy the Professional Pack from Silica Shop, you will also receive the Silica ST Starter Kit (worth over £200), FREE OF CHARGE. Return the coupon for further information.



ATARI 1040ST-FM	(Computer)	£499.99
VIP PROFESSIONAL	(Spreadsheet)	£149.95
MICROSOFT WRITE	(Word Processor)	£149.95
SUPERBASE PERSONAL	(Database)	£59.95
BASIC DISK & MANUAL	(Language)	£24.98

**NORMAL RRP: £884.82**

**LESS DISCOUNT: £385.82**

**PROFESSIONAL PACK PRICE: £499.00**

INCLUDING VAT

With SM124 mono monitor: £598 INC VAT

With SC1224 colour monitor: £798 INC VAT

# 2Mb & 4Mb MEGA ST

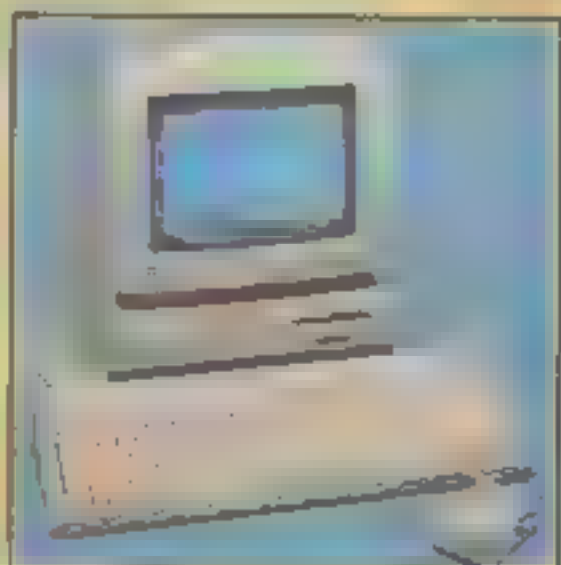
The MEGA ST computers are styled as a lightweight keyboard with a separate CPU, connected by a coiled telephone style cable. There are two versions of the MEGA ST, one with 2Mbytes of RAM and the other with 4Mbytes. Each version has a 1Mbyte double sided disk drive built-in to the CPU unit. The MEGA ST's do not come with modulator built-in and must therefore be used with a monitor. With every MEGA ST purchased, we will add the 'Professional Pack' software (worth £384.83) detailed above, plus the Silica ST Starter Kit (worth over £200), both FREE OF CHARGE. Return the coupon for further details.

**2Mb MEGA ST**  
**£1198**

+ mono monitor = £998  
+ colour monitor = £1198

**4Mb MEGA ST**  
**£1498**

+ mono monitor = £1298  
+ colour monitor = £1498



# DTP PageStream £149 +VAT = £171.35

Desktop Publishing (DTP) is one of the fastest growing applications for personal computers. We are pleased to announce a powerful low cost package for the Atari ST called PageStream. PageStream costs only £149 (+VAT £171.35) and, because it works with an Atari 1040ST and a Senkosha SP-180AI printer, you can be up and running with a complete system for less than £1000. Some of the features of PageStream are listed to the right. If you would like further information on this program, complete and return the coupon below, ticking the DTP box in the corner.

- TEXT-FLOW AROUND GRAPHICS
- ROTATION OF TEXT & GRAPHICS
- SLANT OR TWIST ANY OBJECT
- POSTSCRIPT COMPATIBLE
- TAG FUNCTION
- AUTO/MANUAL KERNING & HYPHENATION
- GROUPING OF OBJECTS

# DO YOU OWN AN ATARI ST?

If you already own an Atari ST computer and would like to be registered on our mailing list as an ST user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist ST service that is second to none.

## SILICA SHOP

**SIDCUP (& Mail Order) 01-309 1111**  
1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX  
OPEN: MON-SAT 9am - 5.30pm LATE NIGHT: FRIDAY 9am - 7pm

**LONDON 01-580 4000**  
52 Tottenham Court Road, London, W1P 0BA  
OPEN: MON-SAT 9.30am - 6.00pm LATE NIGHT: NONE

**LONDON 01-629 1234 ext 3914**  
Selfridges (1st floor), Oxford Street, London, W1A 1AB  
OPEN: MON-SAT 9am - 6.00pm LATE NIGHT: THURSDAY 9am - 8pm

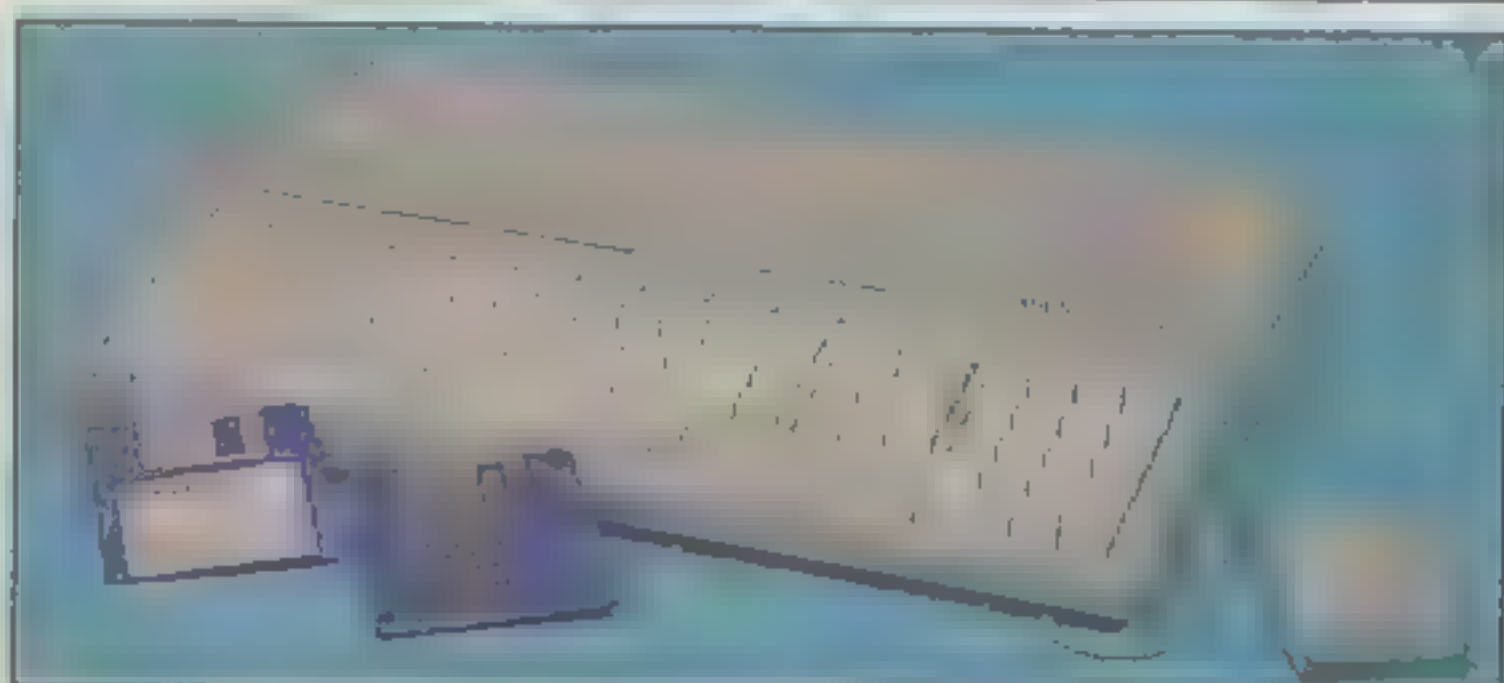


# ST COMPUTERS

The range of Atari ST computers offers something for everyone. From the games enthusiast who wants the challenge of the very best in arcade action, to the businessman who wants to make financial forecasts or faultless presentations. The ST offers high quality graphics, sound and speed for the gamer, whilst providing a fast, user friendly and affordable solution to business. The ST is now firmly established as the home environment and boasts a wealth of users in education, local government, television, and a variety of different businesses. Software for the range stretches to cover applications as diverse as ENTERTAINMENT, ACCOUNTS, ART, COMMUNICATIONS, COMPUTER AIDED DESIGN, DATABASES, DESKTOP PUBLISHING, EDUCATION, MUSIC, PROGRAMMING, SPREADSHEETS, WORD PROCESSING and more. For a full list of the software available, as well as details of the ST range, complete and return the coupon below.

All prices correct at time of going to press. £606

# 520ST-FM EXPLORER PACK WITH BUILT-IN 1Mb DISK DRIVE



The value for money offered by the Atari ST range is reflected in the Explorer Pack featuring the 520ST-FM computer with 512K RAM. The 520ST-FM computer now comes with a built-in 1 Mb double sided disk drive as well as a free mouse controller and a built-in TV modulator. The new 520ST-FM Explorer Pack includes the 520ST-FM computer, the arcade game Ranarama, a tutorial program and some useful desktop accessories. In addition, if you buy the Explorer Pack from Silica, we will give you the Silica ST Starter Kit worth over £200, FREE OF CHARGE. Return the coupon for details of our Starter Kit and of the full ST range.

**£260** ONLY  
**£299** +VAT=

+ SM124 mono monitor: £398 INC VAT

+ SC1224 colour monitor: £598 INC VAT

# WHY SILICA SHOP?

Before you decide when to buy your new Atari ST computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer and expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Atari ST related products in the UK, a full time Atari ST specialist technical helpline and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established in the home computer field for ten years with an annual turnover in excess of £1 million and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. But don't just take our word for it. Complete and return the coupon below for our latest literature and begin to experience the Silica Shop specialist Atari service.

**SILICA STARTER KIT:** Worth over £200, FREE with every Atari ST computer bought from Silica.

**PROFESSIONAL PACK:** Free business software with 1040ST-FM and MEGA ST's bought from Silica.

**DEDICATED SERVICING:** 7 full-time Atari trained staff with years of experience in Atari servicing.

**THE FULL STOCK RANGE:** All of your Atari requirements from one place.

**AFTER SALES SUPPORT:** The staff at Silica are dedicated to help you get the best from your ST.

**FREE CATALOGUES:** Mailed direct to your home as soon as we print them, featuring offers as well as all of the new releases.

**FREE OVERNIGHT DELIVERY:** On all hardware orders shipped within the UK mainland.

**PRICE MATCH PROMISE:** We will match competitors on a 'same product same price' basis.

**FREE TECHNICAL HELPLINE:** Full time team of Atari technical experts always at your service.

# FREE SILICA STARTER KIT WORTH OVER £200

**WITH EVERY ST - RETURN COUPON FOR DETAILS**  
**ALL PRICES QUOTED INCLUDE FREE UK DELIVERY**

To: Silica Shop Ltd, NCE 0390, 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX

**PLEASE SEND FREE LITERATURE ON THE ATARI ST**

Mr/Mrs/Ms: Initials: Surname:

Address:

Postcode:

NCE 0390

Do you already own a computer?  
If so, which one do you own?

DTP ☐



# UK HOME COMPUTERS

## INTERNAL MODEMS

For IBM PC's & Compatibles

- \* BAUD RATE SCAN ON DIAL
- \* 2 LEVEL CONFIGURATION
- \* BELL TINKLE SUPPRESS
- \* HAYES COMPATIBLE
- \* BT TELEPHONE SOCKET
- \* 1200/75 BAUD
- \* 300/300 BAUD
- \* DATATALK SOFTWARE
- \* £40 TELECOM VOUCHER
- \* SPEED BUFFERING
- \* AUTO RE-DIAL
- \* RESET FACILITY
- \* AUTO ANSWER
- \* AUTO DIAL
- \* 75/1200 BAUD
- \* MADE BY PACE
- \* FULL INSTRUCTIONS
- \* COMPLETE PACKAGE

THIS PACKAGE CONTAINS ALL THE EQUIPMENT NECESSARY TO COMMUNICATE VIA: PRESTEL, TELEX, ELECTRONIC MAIL, BULLETIN BOARDS, FILE TRANSFER. SUITABLE FOR ALL IBM'S & CLONES.

**OUR PRICE £79.95p** plus £3.05p Post

## ERICSSON PC/XT

Check the features against our low price. 640K RAM, Twin 360k 5.25" disk drives, 4 expansion slots, MS-DOS 3.3, Hercules compatible CGA Card, Twin serial & parallel ports, Battery back-up, 91 key keyboard, measures only 15"X12"X5.5", BROTHER 12" Hi-Res Amber Monitor, 8087 Co-Processor socket, & fully IBM Compatible.



**BEST BUY**

**OUR PRICE £449.95p**

This price includes VAT, Carriage & 3 Public Domain Programs, i.e. Word-processor, Database, & Spreadsheet. Send for details.

## 3.5" UNCASED DRIVES

Top-Quality Slim-Line disk drives made by Fujitsu & Citizen. Available in either 1Mb or 2Mb unformatted capacity. Suitable for most micros including PC's & ATARI ST. 5.25" Cradle available for the Citizen drives at only £12.00p inc. Post

**1 Mb DISK DRIVE £49.95p**

**2Mb DISK DRIVE £54.95p**

Postage & Packing £3.05p

## MICROSOFT WINDOWS

Version 2.0, 5.25" disks plus comprehensive manual. Probably the most useful package for the IBM PC & Clones. Package also includes FREE Microsoft PAGEVIEW. A WINDOWS utility. Normal price for both packages is around £80-£90p.

Send today. Stocks are very limited.

**OUR PRICE £29.95p**

Postage & Packing £3.05p.

## PC NETWORKS

The offer of the Year. The complete AMSTRAD 3-Station Network System as reviewed by PC-PLUS January 1989. Now you can afford to link up to 3 Amstrad PC's or IBM compatibles at a fraction of the original cost. This package comes complete with all interfaces, cables, connectors etc. and full documentation. Send TODAY for the full package details together with a copy of the PC-PLUS review. The original price for this package was £399.00p plus VAT. Our Price is just £199.00p including VAT & Postage. There is just one catch. Stocks are very limited so order early to avoid disappointment. **£199.00p fully inc**

## SINCLAIR Q.L.

Fast 68008 CPU 128K RAM. Twin fast-access Microdrives.

Complete with all manuals, cables, PSU, and software (Wordprocessor, Database, Spreadsheet, & Graphics.)

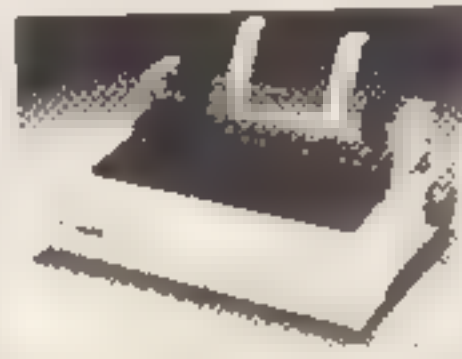
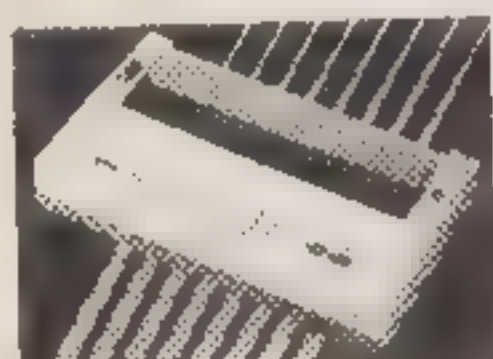
**JM ROM £99.95p**

**JS ROM £119.95p**

Postage & Packing £4.05p.

## DISCOUNT PRINTERS

TOP BRANDS - LOWEST PRICES



**BROTHER M1109 £129.95p**

**BROTHER M1209 £149.95p**

**CITIZEN LSP 100 £149.95p**

Postage & Packing £5.05p

## PC AT/XT KEYBOARDS

Top-Quality 101 key-keyboards made by ZENITH DATA SYSTEMS. Standard AT layout, and switchable between PC/XT & PC/AT. Don't put up with your inferior keyboard any longer, at our price you can afford to upgrade NOW! Standard 5-Pin DIN Connection makes this keyboard compatible with almost all IBM's and clones. Stocks are very limited so send today!

**OUR PRICE £39.95p inc. Post**

## ZENITH OWNERS

We have just concluded a big deal for a vast quantity of ZENITH accessories and parts. From SKYFAX Modems to EAZY-PC Memory modules. From diagnostic packs to Software transfer packs. Send today for our full details and enclose details of your machine..

## SAMSUNG 6000/1 PC/AT

A top-branded PC/AT at an XT price. 80286 Processor with a 6/10 MHz speed. 1Mb RAM, 6 expansion slots, 1.2 Mb 5.25" floppy, 102 key keyboard, battery back-up, Hercules/Monochrome Video Card, RS232 & Parallel Ports, MS-DOS 3.2 & GW-Basic.



**£599.00p**  
Plus VAT & Carriage

**SEND FOR DETAILS**

Our all-in price of £700.00p includes the Brand New Samsung, an Ex-Display Mono Monitor, & O/N Delivery.

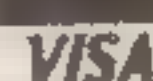
## BARGAIN BASEMENT-TO CLEAR

AMSTRAD PPC512 SINGLE DRIVE	£359.95
AMSTRAD PPC 512 DOUBLE DRIVE	£449.95
8087-8MHz MATHS CO-PROCESSOR	£50.00
MICROSOFT BASIC	£7.50
GW BASIC COMPILER	£10.00
COMMODORE PLUS 4 D/DRIVES	£59.95
COMMODORE C64 MUSIC SYSTEM	£29.95
SHARP PC 4501A MEMORY UPGRADES	
PER 128K RAM SET	£33.00
AMSTRAD 12" MONO VGA MONITOR	£79.95

**PHONE FOR AVAILABILITY & CARRIAGE COSTS**



VISA/ACCESS orders welcome. Prices subject to change without notice. All transactions are subject to our standard conditions of Sale, available upon request. Personal callers welcome by appointment. All prices include VAT. All goods Brand New unless expressly stated otherwise



## UK HOME COMPUTERS

82 CHURCHWARD AVENUE,  
SWINDON, WILTS, SN2 1NH.  
**0793 695034**



# BEST SHOPPING EXPRESS

- Bargains
- Advice
- Prices
- Offers
- Jobs

The weekly computer market place for people serious about buying

THIS WEEK'S BUYERS' GUIDE

## MODEMS PRINTERS & PORTABLES

The hardware buyer's  
bible for those  
essential peripherals

STARTS ON PAGE 23

### JOB SHOPPING?

Check out our  
recruitment section inside

### ALSO INSIDE

● **Take**  
advantage of our  
latest mail order offers.

● **Benefit**  
from our reliable buy-  
ers' guides. No waffle,  
just facts.

● **Pick up**  
bargains galore from  
dealers and readers  
from all over the UK.

● **Score**  
on the free reader  
adverts. Sell your prod-  
ucts for *absolutely no*  
*charge!*

Save your cash,  
save your time



# DOLAN ELECTRONICS LIMITED

DANFFORDD GAR HOUSE  
CARMARTHEN, DYFED  
SA32 7DU.

SALES: 0267 234444

FAX: 0267 231863



all prices ex VAT & Delivery  
CWO or COD available



specifications subject to change.

## £399!

### 12MHz XT

- ★ 640Kb RAM expandable to 1Mb on board
- ★ 12MHz CPU switchable to 4.77MHz
- ★ 102 Key Keyboard
- ★ 360Kb 5 1/4" Floppy Drive
- ★ 2 Serial Ports
- ★ 2 Parallel Ports
- ★ Real Time Clock/Calendar
- ★ 5 Free Expansion Slots
- ★ Hercules Graphic Card & High Res Mono Monitor
- ★ EZ-DOS vers. 4.01 & Basic
- ★ Full Set of Manuals & Documentation

Single Drive 12" Green Mono System .... £399  
40Mb 30Ms 12" Green Mono System .... £599  
14" Flat Screen Paper White Mono .. add..£35  
14" EGA Colour Monitor ..... add..£226  
720Kb 3 1/2" Floppy Drive ..... add...£65  
640Mb to 1Mb RAM Upgrade ..... add...£45

## £2195!

### 33MHz 386

- ★ 4Mb RAM expandable to 16Mb on board
- ★ 33MHz CPU Landmark Speed 44MHz w/32Kb Cache
- ★ 102 Key Keyboard
- ★ 1.2Mb 5 1/4" & 1.44Mb 3 1/2" Floppy Drives
- ★ 45Mb 25Ms Hard Drive w/1:1 Interleave 32Kb Cache
- ★ 2 Serial Ports
- ★ 2 Parallel Ports
- ★ Real Time Clock/Calendar
- ★ 5 Free Expansion Slots
- ★ Super VGA Card w/512Kb RAM 1024x768 High Res Mono Monitor
- ★ EX-DOS vers. 4.01 & Basic
- ★ Full Set of Manuals & Documentation

Complete System Mono ..... £2195  
Complete System VGA Colour ..... £2345  
Complete System Super VGA Colour ..... £2495  
130Mb 18Ms Hard Drive Upgrade ..... add...£350

## £795!

### 16MHz 386-SX

- ★ 1Mb RAM expandable to 8Mb on board
- ★ 16MHz CPU switchable to 6MHz
- ★ 102 Key Keyboard
- ★ 1.2Mb 5 1/4" & 1.44Mb 3 1/2" Floppy Drives
- ★ 2 Serial Ports
- ★ 2 Parallel Ports
- ★ Real Time Clock/Calendar
- ★ 5 Free Expansion Slots
- ★ Super VGA Card w/256Kb RAM High Res Mono Monitor
- ★ EZ-DOS vers. 4.01 & Basic
- ★ Full Set of Manuals & Documentation

Dual Drive Mono System as above ..... £795  
20Mb 40Ms Mono System ..... £995  
45Mb 25Ms Mono System w/32Kb Cache ..... £1145  
14" VGA Colour Monitor ..... add...£200  
14" Super VGA Colour Monitor .... add...£350

## MISCELLANEOUS

XT 40Mb 40Ms Hard Drive Kit ..... £199  
XT 40Mb 40Ms Hard Card ..... £215  
AT 45Mb 25Ms Hard Drive ..... £275  
60mb Internal Tape Backup ..... £450  
60Mb External Tape Backup ..... £425  
360Kb 5 1/4" Floppy Drive ..... £40  
1.2Mb 5 1/4" Floppy Drive ..... £55  
720Kb 3 1/2" Floppy Drive ..... £65  
1.44Mb 3 1/2" Floppy Drive ..... £85  
Microsoft Windows vers 2.03 ..... £25  
Logotron 8 in 1 software ..... £30  
Genius Mouse w/Dr-Halo Software ..... £35

The **DOLAN COMPUTERS** have the reliability, performance and price that leaves the competition standing. Our professional quality systems come fully configured and ready to run. The DOLAN COMPUTERS were the outright winners in a recent survey of over 50 computers.

The DOLAN COMPUTER range are unbeatable on specification and price.



# THE SHOPPING EXPRESS BUYERS' GUIDE TO PRINTERS, MODEMS & PORTABLES

The first peripheral most people buy is a printer – a word processor is pretty useless without one! Here we present the Express guide to dot-matrix printers, together with some advice on portables and modems

## PRINTERS

Every computer owner needs a printer. From the largest corporate business to the smallest home user the time will come when you need more than what's shown on screen, you'll need hard copy.

### ● AMSTRAD DMP4000

0279 454555  
£349  
9-pin • 200cps draft 50cps NLQ •  
8K buffer • Epson compatible

Bottom of the usable range Amstrad printer, which is unsophisticated, provides only adequate printing quality and which is expensive when compared with similarly-specified machines from other manufacturers. The device is both Epson and IBM compatible.

Power ★★★

Value for money ★★

### ● AMSTRAD LQ3500

0279 454555  
£349  
24-pin • 160cps draft 54cps NLQ •  
8K buffer • Epson compatible

Amstrad's weird and wonderful pricing structure has ensured that this 24-pin printer offering roughly similar specifications to the DMP4000 but a vastly improved print quality is the same price – and you can find good discount deals. 160cps draft speed for a 24-pin dot matrix machine is outrageously slow and the 8K buffer doesn't excite thrills of desire.

Power ★★

Value for money ★★★

### ● AMSTRAD LQ5000

0279 454555  
£449  
24-pin • 288cps draft 96cps NLQ •  
8K buffer • Epson compatible

One of the best from the Amstrad stable. Featuring reasonable print speeds, a wide carriage and built in tractor feed as standard, the machine is worthy of consideration by small business persons.

Power ★★

Value for money ★★★

### ● BROTHER 1109

061-330 6531  
£195  
9-pin • 100cps draft 20cps NLQ •  
No buffer • Epson compatible

Expensive, underspecified printer from well-known manufacturer Brother who really needs to try harder. Almost £200 for a printer which doesn't have a printer buffer indeed!

Power ★

Value for money ★

### ● BULL COMPUPRINT 4/20

01-568 9191  
From £440  
9-pin • 200cps draft 40cps NLQ •  
7K buffer • Not Epson compatible

Available in a choice of carriage widths and optional serial or parallel interface, the Bull machine is an incredibly expensive, deathly ordinary dot matrix with little to recommend it. Unless you're a corporate buyer with the name Bull indelibly marked on your purchasing order forms, look elsewhere....

Power ★★★

Value for money ★

### ● CITIZEN HQP-40

0895 72621  
£499  
24-pin • 200cps draft 66cps NLQ •  
No buffer • Epson compatible

Citizen have been in the printer business for a number of years and although some of the company's early machines were a little strange, the latest printers are worthy of consideration. The HQP-40 is a fairly expensive, but well made 24-pin printer – but the lack of print buffer should be noted.

Power ★★★

Value for money ★★

### ● EPSON LX-850

0442 61144  
£279  
9-pin • 180cps draft 30cps NLQ •  
3K buffer

Bottom of the range Epson 9-pin machine featuring two NLQ fonts, only moderate print quality but the great name Epson on the panel.

Power ★

Value for money ★

### ● EPSON EX-800

0442 61144  
£629  
9-pin • 300cps draft 60cps NLQ •  
8K buffer

Epson is the name in the printer world. The company whose printer control codes have been adopted as an unofficial standard by almost all other manufacturers. The company's printers are well made, available everywhere and supported by all software. However, the popularity of Epson has ensured the price of the machines has remained inflated when compared with similarly-specified machines from other manufacturers. The EX-800 is fast, and of high quality construction. A optional colour adapter is available.

Power ★★

Value for money ★★★

### ● EPSON LQ550

0442 61144  
£399  
24-pin • 150cps draft 50cps NLQ •  
No buffer

Uninspiring 24-pin mid-range printer from Epson. Four built-in letter-quality fonts, friction and tractor paper handling and good quality printing.

Power ★★★

Value for money ★★★

### ● EPSON FX850

0442 61144  
£459  
9-pin • 264cps draft 54cps NLQ •  
8K buffer

Fast but fairly expensive 9-pin machine featuring innovative cut sheet and fan fold paper handling, quality printing, and fast draft mode.

Power ★★

Value for money ★★

### ● EPSON EX1000

0442 61144  
£829  
9-pin • 300cps draft 60cps NLQ •  
8K buffer

One of the top of the range Epson 9-pin machines which has a fast draft printing mode, but has a tendency to lose the paper feed after 20 or 30 sheets have been processed. First choice for professional programmers needing listings.

Power ★★

Value for money ★★

### ● EPSON DFX5000

0442 61144  
£1,699  
9-pin • 533cps draft 96cps  
NLQ • 3K buffer



# **DATAPLEX**

Petersfield Avenue, Slough  
Berkshire SL2 5DN  
Tel: 0753 35557  
All prices include  
VAT and delivery

## **AMIGA HARDWARE**

Amiga 500 + TV modulator £299  
Amiga 500 + Batman Pack & 5 games, joystick £345.00

## **NEW BATMAN PACK £299 while stocks last!**

### **New from Amiga**

Includes: TV modulator, 3.5" Disk Drive with Amiga DOS Kickstart, Workbench and Batman The Movie game, F18 Inceptor, Paint 2, New Zealand Story.

## **AMIGA ACCESSORIES**

### **Amiga Class of the 90's.....£429**

Inc. database, spreadsheet, WP, music, art & design, logo and BBC emulator.

Amiga A501 RAM pack + Clock.....£99  
Amiga joystick .....£10  
TV Modulator.....£15  
Phillips CM8833 colour monitor (inc. cable) £219  
Phillips BM7502 12" green monitor.....£79  
Phillips BM7522 12" amber monitor.....£89  
Amiga To Philips cable.....£8

## **AMIGA DRIVE**

1 Meg 3.5" external.....£68  
1 Meg 3.5" internal .....£63  
1 Meg 5.25" external.....£99

## **ATARI DRIVES**

1 Meg 3.5 external.....£68  
1 Meg 5.25 external .....£99  
1 Meg 3.5 internal .....£63

## **AMSTRAD COMPUTERS**

Amstrad PCW 8256.....£319  
Amstrad PCW 8512.....£399  
Amstrad PCW 9512.....£419  
Amstrad PC 1640 Single Mono.....£449  
Amstrad PC 1640 Single Col .....£538  
Amstrad PC 1640 Single ECD .....£625  
Amstrad PC 1640 dual mono .....£515  
Amstrad PC 1640 dual col .....£599  
Amstrad PC 1640 dual ECD.....£689

Amstrad PC 1512, Amstrad hard disk version also available - Please ring for prices

## **STAR PRINTERS**

Star LC10 mono.....£135  
Star LC10 II mono .....£159  
Star LC10 colour.....£168  
Star 2410 .....£225  
Star LC15 9 Pin 136 column .....£264  
Star LC2415 24 Pin .....£328

## **PANASONIC**

### **Unbeatable Prices!**

Panasonic 1081 .....£125  
KXP 1124 .....£219  
KXP 1180 .....£144

## **CITIZEN PRINTERS**

Citizen 120D.....£125  
Citizen 180E.....£127  
Swift 24 .....£255  
Colour upgrade for Swift .....£42

## **MANNESMAN TALLY**

Mannesman MT 81 Dot Matrix.....£115  
Mannesman Sheetfeeder.....£62  
Mannesman Serial Interface .....£49

## **REPAIRS FOR AMIGA AND ATARI**

If you want a mega-fast printer this is your baby. At 533 characters per second in draft, this machine is the fastest of the Epson range. 96 characters in NLQ mode is fairly racing along too!

Power ★★★★★

Value for money ★

## **IBM PROPRINTER III**

01 747 0747

£442

9-pin • 320cps draft 65cps NLQ • 32K buffer

Fast, and with a huge print buffer and reasonable price tag (when compared with similar machines from Epson and Amstrad) the IBM is the first choice for the corporate buyer.

Power ★★★★★

Value for money ★★★★★

## **IBM QUIETWRITER III**

01-747 0747

£1,139

274cps draft 171cps NLQ • No buffer

Calling migraine sufferers everywhere! The Quietwriter III from IBM relies on thermal technology to provide whisper quiet operation at a fast printing speed

Power ★★★

Value for money ★★★

## **MICRO PERIPHERALS MP165+**

0706 217799

£198

9-pin • 190cps draft 32cps NLQ • No buffer • Epson compatible

Bottom of usable range Micro Peripherals printer which provides reasonable print quality and speed at a moderate price. Many dealers offer large discounts.

Power ★★

Value for money ★★★★★

## **MICRO PERIPHERALS MP200+**

0706 217799

£299

pin • 240cps draft 40cps NLQ • buffer • Epson compatible

Fast, moderately priced printer which can accept a range of plug-in font cards ensuring the versatility of the printer. Good deals to be had.

Power ★★★

Value for money ★★★

## **OLIVETTI DM250**

0908 374900

£649

24-pin 180cps draft 60cps NLQ 24K buffer Epson compatible

Good quality printer from erstwhile typewriter manufacturer Olivetti. This device features a large print buffer and moderate printing speed. However, the price tag is just a little on the large side

Power ★★

Value for money ★★

## **OLIVETTI DM100/105**

0908 374900

From £235

9-pin • 120cps draft 25cps NLQ • 7K buffer • Epson compatible

Unpretentious little matrix machine from Olivetti which can also be had in a colour version (DM105).

Power ★★

Value for money ★★

## **PANASONIC KXP1081**

0344 853915

£219

9-pin • 180cps draft 24cps NLQ • 1K buffer Epson compatible

Very popular do matrix printer from well-known manufacturer Panasonic. Reasonably specified, fully Epson compatible and available discounted at a price which will take your breath away this machine is the first choice for prospective printer purchasers with limited budgets.

Power ★★★

Value for money ★★★★★

## **STAR LC10**

0494 471111

£199 (mono), £259 (colour)

9-pin • 144cps draft 36cps NLQ • 4K buffer • Epson compatible

Like the Panasonic KXP1081, the LC10 from Star is a very popular, highly desirable dot matrix, featuring good specifications, full Epson compatibility and a colour option all at a breath-takingly small (discounted) price.

Power ★★

Value for money ★★★★★

## **PORTABLE COMPUTERS**

There's never been a better time to buy a portable computer. Advances in technology, the breaching of the PC compatibles market by Amstrad and the price wars of the major manufacturers have all ensured that you can buy a pocket or laptop computer with processing power which previously would have occupied a room...



★ STAR PREFERRED CORPORATE SPECIALIST NATIONAL DEALER ★

**FREE HYPERDRAW/**  
**FREE Pocket Calculator with**  
**every AMIGA**

**A M I G A**

**A500 BAT-PACK**  
**INCLUDES:**  
 • Batman The Movie • New Zealand  
 Story • F18 Interceptor • "D" Paint II  
 • Workbench 1.3 • Kickstart 1.3  
 • Amiga Basic • Desktop Utilities  
 • New Tutorial Pack • TV Modulator

**£357.00**

**WITH TENSTAR PACK**  
**£387.00**

**WITH EVERY ST & FREE**

**HYPERPAINT/ FIRST WP**

**£50.00 SOFTWARE VOUCHER**

**STAR**

**STAR RECOMMENDED CORPORATE DEALER**

**HOME AND BUSINESS SERIES**

**LC-10 9 PIN MONO** ..... £159.00  
 COMMENT: EXCELLENT NEAR LETTER QUALITY EVEN IN ITALICS MODE  
**LC-10 II MONO** ..... £179.00  
 COMMENT: 25% FASTER VERY ACCURATE LINEFEED FOR GRAPHICS  
**LC-10 COLOUR** ..... £197.00  
 COMMENT: LC-10 SPECS COLOUR FEATURES NOW WELL SUPPORTED  
**LC-15 9 PIN MONO** ..... £306.00  
 COMMENT: IDEAL FOR LONG PRINT RUNS AND LABEL PRINTING  
**LC-24-10 24 PIN LQ** ..... £239.00  
 COMMENT: LETTER QUALITY EXTENSIVE FONT RANGE INCLUDING SCRIPT  
**LC-24-15 24 PIN LQ** ..... £383.00

**Approved by**  
**HEWLETT PACKARD**  
**LASERJET SERIES II**  
**capables**

**SUPER**  
**CARTRIDGES**

**PostScript**

**PostScript Emulation Cartridge 35 Font**  
**Families Requires only 2 Mbytes of**  
**memory ONLY**  
**£545.00 plus VAT**

**25 cartridges in 1**

**Fonts from 25 different Cartridges in one**  
**172 Fonts and 20 complete Symbol Sets**  
**Supports Portrait and Landscape printing**  
**ONLY £359.00 plus VAT**

**HPGL Plotter CART**

**Full HPGL Plotter Emulation 20 Black pens in user defined sizes of 0.003" to 0.16"**  
**Compatible with ALL major CAD / CAM software packages Plotting speed upto a**  
**100 times faster ONLY £305.00 PLUS VAT**

**COMPUTERHOUSE UK**

**TEL: (01) - 731 - 1276**  
**14, ROMILY COURT, LANDRIDGE ROAD, FULHAM, LONDON SW6 4LL**

**IBM/ST PROTEXT WORDPROCESSOR RRP £99.95 OUR SPECIAL £39.95**

**CLASS**  
**of the 90's**

**FREE F18 INTERCEPTOR worth £24.95**

**EDUCATION PACK**

**PACK BREAKDOWN**

**HARDWARE**

Amiga A500 Computer ..... 399.99  
 Midi Master Interface ..... 34.99  
 TV Modulator ..... 24.99

**SOFTWARE**

Tutorial Pack .....  
 Deluxe Paint II ..... 49.95  
 Publishers Choice ..... 99.95  
 Maxiplan 500 ..... 99.95  
 Superbase Personal ..... 59.95  
 Dr. T's Recording Studio ..... 49.95  
 Workbench 1.3 .....  
 Kickstart 1.3 .....  
 Desktop Utilities ..... 14.99  
 BBC Software Emulator ..... 49.95  
 Amiga Basic Language .....  
 Amiga Logo Language ..... 82.00

**ACCESSORIES**

Mouse Mat ..... 4.39  
 10 Blank 3.5" Diskettes ..... 9.99  
 Disk Wallet ..... 12.95  
 1 yr. Sub to Amiga User ..... 23.00  
 Education support file  
 (after 1 yr sub to Amiga User)

**TOTAL RRP = 1016.99**  
**PACK DISCOUNT = 437.00**

**PROMOTION PRICE = 579.99**  
**OUR PRICE = £509.00**

**BUSINESS, SCIENTIFIC, EDUCATION AND VIDEO GRAPHIC SOFTWARE**

ST PC Speed ..... £255.00  
 (IBM PC Emulator)  
 ST Mega Co-processor ..... £125.00  
 ST Macintosh Emulator ..... £229.00  
 (Runs 20% faster than a Mac Computer)  
 Amiga Macintosh Emulator ..... £229.00  
 Cameron A4 Scanner (AM/ST) £459.00  
 Amiga Flicker Master ..... £12.00  
 Amiga DOS to DOS ..... £39.95  
 (MS DOS File Converter)  
 LC10 Mono ribbons ..... £3.50  
 LC10 Colour ribbons ..... £6.00  
 LC24-10 Mono ribbons ..... £4.50  
 FR/XB Mono ribbons ..... £12.00  
 Atari 1029 Mono ribbons ..... £4.95  
 100 x 3.5" disc box ..... £7.95  
 10 x 3.5" DS/DD discs ..... £7.35  
 60 gsm x 2000 sheet paper ..... £16.95  
 85 gsm x 1000 sheet paper ..... £12.95

**520 STE**  
**EXPLORER PACK**  
**£278.00**

**520 STE**  
**POWER PACK PLUS**  
**£357.00**

**1040 STE**  
**HYPER PACK**  
**£435.00**

**MEGA 1 ST**  
**HYPER PACK**  
**£489.00**

**PORTFOLIO-PORTABLE PC**  
**£235**

**AMIGA 500**  
**XP 331**  
**DISC DRIVE**  
**£165.00**

**FREE!! Utilities and tools pack with every ST purchase. Software Blitter, ST Diagnostics, Disk Editor/Custom Formatter, Disk Boot Construction Set, Alarm Clock, Quick Formatter, Calculator, Custom Format Disk Duplicator, Printer Customiser Tool, Desktop Games, ARC Construction Set, System Selector, 50/60 HZ Switcher and Synchronizer, Snapshot Dumper, RAM/Print Spooler, Word-processor AND MUCH MUCH MORE!!**

**AMIGA ADDITIONS**  
**A500 3 1/2" 1 Meg Drive**  
**£75.00**  
**1/2 Meg A500 RAM Upgrade with switch & clock.....£84.00**  
**without clock.....£69.95**

**All prices include VAT**





## C & M MICROS



### DON'T BUY DISKS OFFERING ANYTHING LESS!

All our disks have a lifetime money back or free replacement guarantee. Each disk is certified 100% error free and comes complete with labels and tabs (5 1/4").

3 1/2" bulk disks manufactured by SONY/VERBATIM  
5 1/4" bulk disks manufactured by SENTINEL/VERBATIM

Bulk disks	10	25	50	100	150	200	300	500
3.5" DS/DD(135)	£7.50	£18	£34	£66	£96	£124	£180	£290
3.5" DS/HD(2Mb)	£22	£53	£100	£195	£283	£366	£531	£856
5.25" DS/QD(96/48)	£4	£9	£16	£30	£43	£56	£80	£130
5.25" DS/HD(1.6Mb)	£8	£18	£32	£60	£86	£112	£160	£260
3" DS (Maxell)	£23	£57	£112	£219	£327	phone	for	prices

### BRANDED DISKS MANUFACTURED BY THE SONY CORPORATION OF JAPAN.

Sony Brand	1-2	3-4	5-9	10+
3.5" DS/DD(135)	Boxes £12.00	£11.50	£11.00	£10.50
3.5" DS/HD(2Mb)	of £28.00	£27.00	£26.50	£26.00
5.25" DS/QD(96/48)	10 £11.00	£10.50	£10.00	£9.50
5.25" DS/HD(1.6Mb)	disks £14.00	£13.50	£13.00	£12.50

Strong disk boxes. Lockable with 2 keys, dividers & recessed handle. Add £1 P&P if not ordered with disks.

3 1/2" 40 Capacity	£4.50	80 Capacity	£6.50
5 1/4" 60 Capacity	£4.50	100 Capacity	£6.50

COLOURS™ DISK PACKS. 10 coloured 3 1/2" DS/DD disks (2 of red, orange, yellow, green, blue) in a 10 capacity library case with labels and our lifetime guarantee. Only £9.50 (Pic & Mix selections available, please phone for details!)

ALL PRICES INCLUDE VAT. P&P FREE (UK ONLY).

Orders below £15 in value carry a handling charge of £1.  
Please phone or write for a FREE price list.

C & M Micros, Dept. NCE, 25 Middlefield Road, Bessacarr,  
Doncaster, S. Yorkshire. DN4 7EB.



Cardnet credit card hotline (0302) 539955



or cheques/postal orders payable to C & M Micros.

## FREE DISKS!!! 1 FREE DISK FOR EVERY 10 THAT YOU BUY

10	3.5" DISKS + BOX	£09.00
25	3.5" DISKS	£19.00
50	3.5" DISKS	£33.50
50	3.5" DISKS + BOX	£38.00
100	3.5" DISKS	£63.00
100	3.5" DISKS + BOX	£67.50



ALL PRICES INCLUDE VAT

ALL PRICES INCLUDE DELIVERY

ORDER DESPATCHED SAME DAY

**mph**

10 CHANDLERS CT  
EATON  
NORWICH  
NORFOLK  
0603  
503382

### ● AMSTRAD PPC512

0279 454555

£499

8086 CPU • LCD CGA screen •  
512K RAM • Single/twin floppy  
drive(s)

sonable screen display and rugged construction.

Power \*\*\*\*

Value for money \*\*

Amstrad has a finger in every pie and the portable PC compatible market is no exception. The entry level machine is the PPC512, featuring a full sized keyboard, but poor screen, not much memory and not much else to recommend it. Look elsewhere.

Power \*\*

Value for money \*\*

### ● COMPAQ PORTABLE 386

01 940 8860

From £4,695

80386 CPU • 1Mb RAM •  
40/100Mb hard drive 1.2Mb floppy

Top of the range Compaq portable with an optional 100Mb hard drive for those seeking power computing with a capital P. Also featuring a 1.2Mb floppy and a full megabyte of RAM

Power \*\*\*\*

Value for money \*\*\*\*

### ● AMSTRAD PPC640

0279 454555

£799

8086 CPU • LCD CGA screen •  
640K RAM • Double drives • Inter-  
nal V21, V22, V22bis, V23 modem

When first launched, the media recommended the machine as being worth the price for the built-in modem alone. Although quite large and not very pretty, the Amstrad is nonetheless a very usable portable computer at a fantastically low price. Very worthy of your consideration and money.

Power \*\*\*\*\*

Value for money \*\*\*\*\*

### ● COMTECH TECHNOLOGY 286LT

0964 615100

From £1,995

80286 CPU • 1Mb RAM • 32Mb  
hard drive • 1.44Mb floppy

Portable from Comtech UK with the unusual distinction of having a gas plasma rather than LCD display. Plenty of features such as high density 3.5-inch drive and 32Mb hard drive ensure the desirability of this machine.

Power \*\*\*\*

Value for money \*\*\*

### ● BULL PC AP-L

0422 212781

From £1,395

80286 CPU • 1Mb RAM • 20/40Mb  
hard drive

Fast, comparatively lightweight portable from Bull, featuring a megabyte of RAM and choice of hard drives. Screen display reasonable.

Power \*\*\*

Value for money \*\*\*

### ● EPSON PC AX

0442 61144

£2,749

80286 CPU • 640K RAM • 20Mb  
hard drive

Very popular and well made portable from printer manufacturer Epson. The PC AX features a paper white monitor and is light and very portable

Power \*\*\*

Value for money \*\*\*

### ● COMPAQ PORTABLE II

01-940 8860

From £2,395

80286 CPU • 640K RAM • 20Mb  
hard drive • 360K floppy

Expensive, under-specified, portable from a dealer with a reputation for high quality and matching high prices. Compaq machines are rugged, but demand fat wallets.

Power \*\*\*

Value for money \*\*

### ● EPSON FD

0442 61144

£1,199

V30 CPU • 640K RAM • Single/twin  
floppies

One of the cheaper Epson portables but still with a heavy price tag this machine features a fast V30 central processor and is available with a choice of floppy drives (also available in a hard drive 'HD' version).

Power \*\*

Value for money \*\*

### ● COMPAQ PORTABLE III

01-940 8860

From £2,995

80386 CPU • 640K RAM • 20/40Mb  
hard drive • 1.2Mb floppy

Mid range Compaq 386-based portable featuring a choice of drives but lacking sufficient RAM for a machine of these specifications - why cut corners? Rea-



# MEMORY UPGRADES

ONE STOP SOURCE FOR ALL PC MEMORY UPGRADES

**Datrontech. Europe's only dedicated manufacturer and stockist for plug compatible memory. All products carry a five year warranty and are available ex-stock. Call for volume and dealer pricing.**

1

Memory module and chip level upgrades to suit all PC models. Call our unique advisory service for upgrade assistance.

AMSTRAD, AST, DELL, EPSON, EVEREX, HP, INTEL, IBM XT/ATs and CLONES, MITEC, NOVELL, OPUS, SUN, SILICON, GRAPHIC PLUS

256K x 8 - 100	(£)
256K x 8 - 80	22
256K x 9 - 100	23
256K x 9 - 80	26
256K x 9 - 60	32
1M x 8 - 100	60
1M x 8 - 80	63
1M x 8 - 70	69
1M x 9 - 100	85
1M x 9 - 80	88
1M x 9 - 70	75
4M x 8 - 80	490
4M x 9 - 80	550

CALL FOR SIP PRICING

Memory board upgrades available for: ORCHID, EVEREX, TECMAR, INTEL, AST... Call sales office for details.

2

DRAM, SRAM, EPROM & CACHE memory available from stock. Call for quantity pricing and speed selections.

64K x 1 - 120	1.05	256K x 1 - 100	1.75
64K x 1 - 100	1.15	256K x 1 - 80	2.15
64K x 4 - 100	1.85	1M x 1 - 100	6.25
64K x 4 - 80	2.15	1M x 1 - 80	6.65
256K x 1 - 120	1.55	1M x 1 - 70	6.95
		256K x 4 - 100	6.45

\*Scheduled orders are priced protected.

\*Packaged styles include DIL and surface mount

3

**New**

D8087	5MHz	65
D8087-1	10MHz	125
D8087-2	8MHz	95
D80287-6	8MHz	98
D80287-8	8MHz	150
D80287-10	10MHz	175
A80387DX-16	16MHz	260
A80387DX-20	20MHz	295
A80387DX-25	25MHz	370
A80387DX-33	33MHz	455
N80387SX-16	16MHz	235

\*Excellent trade and volume discounts available

\*CMOS options also available

\*Weitek Co-Processors call sales office

4

COMPAQ P/No.	PRICE (£)
<b>DESKPRO 386/33</b>	
2MB Module	115144 345
<b>DESKPRO 386/25</b>	
1MB Module	113131 165
4MB Module	113132 490
<b>DESKPRO 386/20</b>	
1MB Module	113131 165
4MB Module	113132 490

## DESKPRO 386/20e

1MB Module	113131	165
4MB Module	113132	490
1MB Exp/Bd	113533	170
4MB Exp/Bd	113534	550

## DESKPRO 386/5

1MB Module	113646	165
4MB Module	112534	490
1MB Exp/Bd	113633	170
4MB Exp/Bd	113634	550

## DESKPRO 386/16

1MB Kit	108071	255
4MB Kit	108072	680
1MB Exp/Bd	108069	280
2MB Exp/Bd	108060+	Call
4MB Exp/Bd	108070	995
8MB Exp/Bd	108070+	Call
	108072	Call

## PORTABLE I

1MB Kit	113012	94
---------	--------	----

## PORTABLE II

512KB Kit	107331	71
2MB Kit	107332	182

## PORTABLE 386

1MB Kit	107651	288
4MB Kit	107653	930
4MB Extra/Bd	107654	930

## COMPAQ SLT/286

1MB Bd	110235	278
--------	--------	-----

## COMPAQ LTE/286

1MB Bd	117081-001	295
2MB Bd	117081-002	595

\*Call for details on our dealer support programme.

5

## XT/AT UPGRADES

128K board for XT/AT	(£)	78
Extended/Expansion boards		
Orchid Boards with memory		
512K for XT/AT		265
1MB		299
2MB		345
4MB		495
8MB		790

Other configurations available. Orchid boards take standard SIMM modules. User upgradeable.

## PS/2 UPGRADES

Models 30/286, 50, 50Z, 55, 60, 70 & 80

## PLANAR (MOTHERBOARD) MODULES:

PS/2 25	IBM P/No 78X8955	(£)	34
---------	------------------	-----	----

## PS/2 30/286

512K Kit	30F5348	86
2MB Kit	30F5360	229

## PS/2 50/60

As above fitted with IBM adaptor board	1497259	Call
----------------------------------------	---------	------

## PS/2 50Z

2MB Module	8450604	274
512K Kit	30F5348	86
2MB Kit	30F5360	229

## PS/2 55SX

2MB Module	8450604	274
------------	---------	-----

## PS/2 70 PORTABLE

2MB Module	8450604	274
------------	---------	-----

## PS/2 70 E61 & 121

1MB Module	8450603	152
2MB Module	8450604	274

## PS/2 70 A21

2MB Module	8450608	286
------------	---------	-----

## PS/2 80/041

1MB Bd	8450608	193
--------	---------	-----

## PS/2 80-111 & 311

2MB Bd	8450379	322
--------	---------	-----

**New** 4MB Kit 34F2933 Available now

WAIT NO LONGER

for your IBM memory - all above are EX STOCK

## IBM ADAPTOR BOARDS

2-8MB Expanded memory board using IBM 2MB SIMM modules (8450604) user upgradeable.

## PS/2 50, 50Z, 55Z, 55SX & 60

2-8MB Exp Bd	1497259	449
--------------	---------	-----

## PS/2 70 & 80

2-8MB Exp Bd	8450605	449
--------------	---------	-----

## EMS/LIMM 4.0 BOARDS

Extended/expanded memory boards S/W configurable. Using std SIMM modules. User upgradeable.

512KB 16/32	(£)	295
1MB		315
2MB		360
4MB		515
8MB		820

Call for other configurations

6


TOSHIBA P/No		16
<b>PORTABLE T1600</b>		
2MB card	PC8-PA8302U	344

<b>PORTABLE T3100e</b>		
512K card	PC9-PA8340U	148
2MB card	PC9-PA8341U	344

<b>PORTABLE T3200</b>		
3MB card	PC6-PA7137U	485

<b>PORTABLE T5100</b>		
2MB card	PC7-PA8301U	344

<b>PORTABLE T5200</b>		
2MB Module	PC10-PA8304U	344

<b>PORTABLE T3200 SX</b>	
2MB card	PC12-PA8307U

<b>DESKTOP T8500 SX</b>		
2MB card	PC10-PA8304U	344

7

<b>MacINTOSH II, IIx, IIx</b>	(£)
1MB Kit	98
2MB Kit	125
<b>MacINTOSH IIc</b>	
4MB Kit	240

## Laserwriter II/NXT

1MB Exp/Kit	145
4MB EXP/Kit	449

8

<b>8MB VAX STN 3100</b>	(£)	1,727
12MB		1,993
16MB		2,792
Call for trade pricing		

9

<b>8MB Model 4D/120, 220, 240, 280</b>	(£)	1,885
4MB Model 4D/40, 50, 70 & 80		459
4MB Model 4D/20		459
16MB Model 4D/40, 50, 70, & 80		859

10

## MEMORY

### Laserjet II & II D

1MB	£146	4MB	£399
2MB	£265		

### Laserjet IIP

1MB	£179	3MB	£355
2MB	£285	4MB	£435

## FONT CARTRIDGES

100% HP compatible font cartridges

<b>STANDARD CARTRIDGES:</b>	(£)
86/A, C, D, E, G, H	49
86/B, F, J to Q, S to Y	69
86/R & Z	79

**New** 65-in-one CARTRIDGE 135  
65 popular fonts on cartridge  
\*UK version includes E, Line Draw & OCR-A  
\*Equiv/Enhanced to HP Pro Collection

11

<b>512K to 1MB</b>	(£)
2MB	140
4MB	265

Datrontech also offer upgrades on popular Commodore, Amiga & Amstrad PCs. Call for details.

12

Please send me more details on the following:

1	2	3	4	5	6	7	8	9	10	11
---	---	---	---	---	---	---	---	---	----	----

Please tick

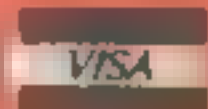
Name .....

Company .....

Address .....

Tel. No. ....

CALL 0252 315155



UNIVERSAL LTD



# MISTRAL COMPUTER SUPPLIES

Mail Order

0705 453814

Mail Order

## AMIGA

## SOFTWARE

## ST

	A	ST		A	ST
F29 Retaliator.....	16.99	13.99	Turbo Outrun.....	16.99	13.99
Pool of Radiance.....	16.99	16.99	Interphase.....	15.99	15.99
Damocles.....	16.99	16.99	Space Ace.....	29.99	29.99
Unlouchables.....	16.99	13.99	Altered Beast.....	16.99	13.99
Iron Lord.....	19.99	19.99	Beach Volley.....	16.99	13.99
Chaos Strikes Back.....	16.99	16.99	Super Wonderboy.....	16.99	13.99
Dragon Spirit.....	13.99	13.99	Dragon of Flame.....	16.99	16.99
Drakkhen.....	19.99	19.99	Fiendish Freddy.....	19.99	19.99
Fast Lane.....	13.99	13.99	Xenon II.....	16.99	16.99
Last Ninja II.....	16.99	16.99	Double Dragon II.....	13.99	13.99
Rainbow Island.....	16.99	16.99	Gazza's Soccer.....	16.99	16.99
Cabal.....	16.99	13.99	P47.....	15.99	15.99
Barbarian II (psygnosis).....	16.99	16.99	F16 Falcon.....	19.99	16.99
Keep the Thief.....	16.99	16.99	Falcon Mission Disk.....	13.99	13.99
Ninja Warriors.....	13.99	13.99	Predator.....	16.99	13.99
Ghostbuster II.....	16.99	13.99	Pin Ball Magic.....	16.99	13.99
Operation Thunderbolt.....	16.99	13.99	Robocop.....	16.99	13.99
Chase H.Q.....	16.99	13.99	Supercars.....	13.99	13.99
Power Duff.....	16.99	13.99	Risk.....	13.99	13.99
Ghosts & Ghosts.....	16.99	13.99	Crossbow.....	13.99	13.99
Stunt Car Racer.....	15.99	15.99	TV Sport Basketball.....	19.99	19.99
Continental Circus.....	16.99	16.99	Scramble Spirits.....	13.99	13.99
Shadow of the Beast.....	24.99	24.99	Manchester United.....	13.99	13.99
E Came from the Desert (1 meg).....	19.99	19.99	Infestation.....	16.99	16.99
Kenny Dalglish II.....	19.99	19.99	Typhoon Thompson.....	16.99	16.99
Sim City.....	19.99	19.99			

## ★ ★ ★ ★ ★ AMIGA HARDWARE ★ ★ ★ ★ ★

Amiga 500 Bat Pack * SPECIAL OFFER*	Phone
A590 Hard Drive 20 M B *SPECIAL OFFER*	£352.99
Vortex 40 meg hard drive *SPECIAL OFFER*	£505.99
External Disk Drive For Amiga.....	£68.00
Amiga 500 + 1084 monitor.....	£307.00
A501 512K RAM exp.....	£72.99
A520 Modulator.....	£22.99
1084 Monitor.....	£215.99

3.5" Disks unbranded, boxed and fully guaranteed.

10 .....50p each 50 + ..... 45p each

Send Cheque/PO to: Mistral Computer Supplies, 42 Park Way, Havant, Hants PO9 1HH

dispatched on day of release. See for full soft & hardware details. Hardware also available for ST64 and IBM. Software also available for all formats.

QL FROM £90

# E.E.C. LTD

PRINTERS FROM £50

QL BACK UP, WITH P.S.U. etc., JM ROM £90  
QL BACK UP, WITH P.S.U. etc., JS ROM £100

## QL COMPLETE AS NEW 2.35 SOFTWARE

JS ROM with Quill, Abacus, Archive + Easel.....	£135
Same with JM ROM.....	£120

90 days warranty on above items

## ★ SPECTRUMS AS NEW ★

48k+ £69.95, 128k £89.95, PLUS ■  
£109.95

## ★ PRINTER CLEARANCE ★

★ ALPHACOM 32 with I.Face & PSU for SPECTRUM.....	£49.95★
ALPHACOM PAPER 1 ROLL £3.50, 5 Roll Pack.....	£12.95
★ SEIKOSHA GP 100A Dot Matrix 80 Col., 50 cps.....	£79.95 ★
Tractor Feed, ideal for QL with Centronics Interface.....	£24.95 only extra
★ STAR NL 10 Dot Matrix 120cps, NLQ 30cps 80 Col Tractor & Sheet Feed Serial Interface - supplied with Free lead for QL & Spectrum.....	£140.00
(Interfaces also available for Centronics and IBM PC's)	

## ★ COMMODORE BARGAINS ★

★ BROTHER HR10 Letter Quality Daisywheel 2K Buffer Tractor Feed, 80 Col., 12 cps. CBM Lead free.....	£129.95 ★
★ NL 10 Dot Matrix 120 cps, NLQ 30cps ■ Col Tractor & Sheet Feed with Commodore Interface Supplied with Free Lead.....	£140.00 ★
★ MICRODRIVE EXPANSION KIT★ Includes Microdrive, Interface 1, Booklet, Network lead, intro, cartridge and flex connector.....	£69.95

EXTRA MICRODRIVES (New).....	£24.95
EXTRA MICRODRIVES (Reconditioned).....	£16.95
CARTRIDGES	
Singles £4.50	Wallets with 4 cartridges £19.00

INTERFACE 1 CONNECTORS AND LEADS each £3.50	
PRINTER (RS232) LEADS FOR INTERFACE ONE.....	£12.95
POWER SUPPLY UNITS 48k Std.....	£8.95
POWER SUPPLY for Heavy Duty or 128K.....	£9.95
POWER SUPPLY for QL or Commodore.....	£18.95

★ Min. Orders £10.00 £6.00 Carriage - Printers and Micros £3.00 other items P & P UK  
Overseas add £15.00 Printers etc. £5.00 others Terms CWO or Visa/Access.  
All offers subject to availability

Orders to EEC Ltd, Dept NCE 1,  
18-21 Misbourne House, Chiltern Hill,  
Chalfont St Peter, Bucks SL9 9UE. Tel: 0753 888866

## ● NEC UK POWERMATE PORTABLE

01-924 1244

From £2,795

80286 CPU • 640K RAM • 42Mb  
hard drive

Superior portable from NEC featuring  
640 x 480 LCD screen with backlight,  
three expansion slots and a CPU speed  
of 16MHz. Altogether a well specified,  
high quality computer.

Power ★★★

Value for money ★★★★★

## ● OLIVETTI M15

0908 374900

From £1,105

80C88 CPU • 512K RAM • 20Mb  
hard drive

The Olivetti range of much coveted  
portables are well constructed, rugged  
and compare favourably with the price  
of machines from rival manufacturers.  
Unfortunately, this machine suffers from  
having only 512K of RAM which simply  
isn't enough for today's quality software.

Power ★★

Value for money ★★

## ● SCHNEIDER PORTABLE AT

0604 766572

£1,995

80286 CPU • 640K RAM • 20Mb  
hard drive

Recently suffering much criticism over  
its Euro PC, Schneider is nonetheless a  
manufacturer of reasonable quality,  
cheap computers. The Portable AT ■  
fully specified and follows the Schneider  
tradition of small prices.

Power ★★★★★

Value for money ★★★★★

## ● SMT SUPER GOLF

01-785 2411

From £3,499

80286 CPU • 640K RAM •  
40/100Mb hard drive

Portable or a German car? This  
machines shares a name and a level of  
construction hard to find elsewhere.  
Featuring an optional 100Mb hard drive,  
the Super Golf is a worthy of power user  
consideration.

Power ★★★★★

Value for money ★★★

## ● TANDY 1400FD

0922 710000

£995

V20 CPU • 768K RAM • Twin flop-  
pies

A portable computer with a price tag  
unmatched outside the Amstrad stable,  
the 1400LT has a CGA-compatible LCD

screen and can be plugged into a colour  
monitor via its built-in port.

Power ★★★

Value for money ★★★★★

## ● TANDY 102

0922 710000

£299

80C85 CPU • 24K RAM • Optional  
disk drive

The journalist's choice. Not PC compati-  
ble but very compact, very light and  
with good word processing software  
built in, this computer should be consid-  
ered by those needing to prepare docu-  
ments on the move. There's even a built  
in modem so you can transfer files while  
at airports, train stations, in hotel rooms  
etc.

Power ★★

Value for money ★★★★★

## ● TOSHIBA TI600

0932 841600

£3,195

80C286 CPU • 1Mb RAM • 20Mb  
hard drive

Mid range Toshiba 286 featuring a  
CMOS low power CPU, hard drive and  
memory expandable to five megabytes.  
Rugged construction and good quality  
screen display.

Power ★★★★★

Value for money ★★★

## ● TOSHIBA T5200

0932 841600

From £4,995

80386 CPU • 2Mb RAM •  
40/100Mb hard drive

Top of the range Toshiba 386-based  
portable. Memory is expandable to an  
enormous eight megabytes, there's a  
100Mb hard drive option, 2Mb RAM as  
standard and two expansion slots.

Power ★★★★★

Value for money ★★★★★

## ● TOSHIBA T1000

0932 841600

£795

80C88 CPU • 512K RAM • Floppy  
drive

Entry-level portable PC. 512K RAM as  
standard expandable to 1.2 megabytes  
(if you can afford the DRAMs). The  
machine has the unusual distinction of  
having MS-DOS contained on ROM  
rather than booted from floppy.

Power ★

Value for money ★★★★★

## ● VICTOR V286P

0494 461600

£2,499

80286 CPU • 1Mb RAM • 30Mb hard  
drive



# ADVANTAGE PC SHAREWARE

- POPULAR TRIED & TESTED PROGRAMS
- FAST DESPATCH - FIRST CLASS
- EASY TO RUN AND USE



## OUR PRICES INCLUDE VAT AND POSTAGE

5 DISCS	£13.25
4 DISCS	£11.25
3 DISCS	£9.45
2 DISCS	£6.95
1 DISC	£3.95

Over 5 Discs £2.50 each for 3.5" Please Add £1 per Disc

**CALL 0242 224340 NOW!**  
**FAX: 0242 226755**

## WORDPROCESSING

- PC-WRITE The well-established multi-function WP
- PC TYPE+ Popular WP, Spell Checker, Undo, Help 4 DISCS
- PC TYPE II Great new WP from Buttonware 3 DISCS
- GALAXY Like WordStar with pull-down menus 2 DISCS
- MINDREADER Clever WP anticipates what you're typing
- PC-OUTLINE Popular brain-storming ideas processor
- SPELLING CHECKER For most WP's Can update dictionary
- THESAURUS Great when searching for alternative words
- HYPER-SHELL Versatile UK hypertext program 2 DISCS

## SPREADSHEETS

- PC-CALC+ Well-known Buttonware spreadsheet 3 DISCS
- AS-EASY-AS Popular and easy use 123 Compatible
- POWER SHEETS Highly rated 3D spreadsheet 3 DISCS
- QUBECALC Easy to use 3-dimensional spreadsheet
- GOALSEEKER Time-saving program helps create spreadsheets
- PIVOT! Prints spreadsheet in landscape or portrait mode

## DATABASE MANAGERS

- PC-FILE+ V.5 popular database with mailmerge 3 DISCS
- PC FILE-dB dBase power at shareware prices 3 DISCS
- FILE EXPRESS Straightforward database system 2 DISCS
- WAMPUM Implements dBase III language-hard disc 2 DISCS
- DREAM Extensive relational database 3 DISCS

## PRINTING

- PRINTER TOOLBOX Sideways printing, Spooler, Print Control, Word Counter, Indexer, Text Analyser and more
- PRINTSHOP features DIY Business Cards, Car Window Posters, Letterhead Maker, Cassette and disc labellers
- LO Set of new fonts to enhance your printed text
- SIGNSMITH Create your posters, leaflets and letterheads
- BRADFORD Typesetting quality on a dot-matrix printer
- TYPEWRITER EMULATOR For quick messages envelopes etc

## HOME & BUSINESS

- FREEWAY CASHBOOK UK account and budget 3 DISCS
- NOYES CASHBOOK New UK cash analyser 999 headings
- FAST BUCKS Full feature account and budget 2 DISCS
- HOME INVENTORY/HOME INSURANCE Log your possessions and estimate their value for insurance purposes
- FREEWAY ACCOUNTS PLUS Popular UK Package with Sales, Purchase & Nominal Ledgers 3 DISCS
- BUSINESS GRAPHICS Line, paragraphs, Piecharts, 2 DISCS
- 100 STANDARD BUSINESS LETTERS to use and adapt
- EZ-FORMS standard business forms to use and adapt
- LABEL MAKER Simple mailing label database and printing
- PRO-COMM PLUS UK The definitive communications program
- EAZI-LINK Supports Prestel and ViewData comms 2 DISCS
- STD CODES in numerical order with corresp. exchanges

## CUSTOM DATABASES

- MUSIC MAESTRO Catalogue and sort your LP's & CD's
- BOOK MINDER Catalogue and sort your book collection
- PHOTOGRAPHER Catalogue printing, processing, archives
- HOME VIDEO Catalogue and sort your videos 2 DISCS
- GENE GENIE Plot your family tree 2 DISCS UK
- MATCHMAKER Now you can start your own dating agency!
- TIMETABLE Class/Staff timetabling for schools 2 DISCS
- RE-MEMBER Easy use database designed for clubs UK

## INFORMATION SYSTEMS

- MOVIE DATABASE Over 3000 films & videos 2 DISCS
- GIFT IDEAS GENERATOR For birthdays & Christmas
- MICRO COOK Recipes organiser - with many included
- BARTENDER Learn how to mix those exotic cocktails
- NIGHTSKY Definitive computer planetarium UK 2 DISCS
- HOROSCOPE Prints horoscope and astrological data
- ASTROL-95 Astrological charts & horoscopes 2 DISCS
- BIORHYTHM MONTHLY Plot your biorhythms and compare
- SPEED READING Practical Course with exercises

## LIFESTYLE

- WEIGHTWATCHER Control calories and lose weight
- HAVING A BABY Plus useful baby name selector program
- LIFESTYLE COMPENDIUM Personality assessment, Personal Success, Self Analysis, Life Expectancy, Smoking
- PC-SPORT Quickly generate your own league tables
- PUNTERS PAL Aims to improve your betting odds
- DANCE TUTOR Teach yourself Disco dancing

## PROJECTS & PASTIMES

- PC JOKES Hotboot, Insults, Drain, Locust, Hotlot, Alien Name Generator, BackTalk, Buzzword Generator
- PC JOKES II April Fool, Deceive, Busy, Soap Opera Plot Generator, Headline Generator, Jive Talk, Madlib
- PAPER AEROPLANES Loads of designs ready to print out
- ORIGAMI Study the oriental art of paper folding
- POET'S CORNER Produce computer-created poems 2 DISCS
- GREETINGWARE Create your own on-screen Greetings Cards
- KNIT-WIT Create a picture on the screen and this will generate your knitting pattern for you UK

## EARLY LEARNING (AGE 3-12)

- AMANDA'S LETTER LOTTO Keyboard and letter skills
- ABC FUNKEYS Entertaining way to learn the alphabet
- AMY'S FIRST PRIMER Basic arithmetic and letters
- CHILDREN'S EDUCATION Teaching while play Alphabet, Animals, Clockgame, Hangman and Mosaic
- NIFTY NUMBERS A good way to learn basic numeracy
- WHACKY WORDS A good way to learn words and spelling
- ANDY'S WORD GAMES Play Opposites, Synonyms, Word Find, Odd man out, Categories, Companions, Plurals

## EDUCATION FOR CHILDREN & ADULTS (AGE 5 UP)

- EXPLORING WORDS Hangman, Spelling, WP, Letterfall
- EXPLORING MATHS Funnels & Buckets, Algebra, Prime
- EXPLORING TIME Telling, Speaking, World Timezones
- EXPLORING SCIENCES Physicals, Equator, Planets
- EXPLORING YOUR IQ Brain-boggling tests and puzzles
- EXPLORING ELECTRONICS From Ohm's Law to Amplifiers
- EXPLORING GEOGRAPHY Gazetteer, 3D-World, Weather
- EXPLORING MUSIC Player, Piano, Composer, Polyphony
- EXPLORING GRAPHICS Animator, Etch-A-Sketch, 3DStar
- EXPLORING COMPUTERS Beginners guide to computers
- Learning a foreign language? Then try this selection of tutorials each little on its own disc:-
- ★ FRENCH ★ SPANISH ★ ITALIAN ★ GERMAN ★ HEBREW
- ★ CANTONESE ★ FRENCH FOR TRAVELLERS
- ★ FRENCH VERBS ★ SPANISH VERBS ★ JAPANESE
- ★ FRENCH HANGMAN

## MATHS & SCIENCES

- WIZ QUIZ Teaches maths in an entertaining way
- MATHS TUTOR Arithmetic through to higher maths
- STATISTICS Data manipulation & analysis 3 DISCS
- PROBABILITY & STATISTICS curve-fit & simulation
- MATHS LAB Linear Algebra & Matrix Theory 2 DISCS
- X-Y SEE Teach & test maths using graphics 2 DISCS
- ELECTRONICS Multi-tool package for engineers
- PHYSICS GCSE REVISION A novel aid to study UK
- COMPUTER SCIENCE GCSE REVISION Study aid UK
- MOLECULE BUILDER Graphics of molecules 2 DISCS

## UTILITIES UNLIMITED

- ESSENTIAL UTILITIES Over 50 of the best utilities
- ADVANCED UTILITIES A more specialised collection
- DISK COMMANDO Professional package similar Norton Utilities at Shareware prices 2 DISCS
- PROFESSIONAL MASTERKEY Powerful disc/file editor
- PACKDISC Economise space and speed up your hard disc
- FLEXIBAK A fast, easy to use hard disc backup program
- FLU-SHOT+ Helps you deal with and avoid PC viruses

## GRAPHIC DESIGN

- DANCAD Accurate 3D frame drawing & animation 2 DISCS
- IMAGE-3D create effective 3D drawings on CGA or EGA
- PC-KEY-DRAW The very popular Desk Top Publisher and scaled drawing package 3 DISCS
- PC-KEY-DRAW LIBRARY Picture & Font Library Utilities
- FINGERPAINT Painting program runs on MSDOS not GEM
- CHARTS UNLIMITED graphics & text processor
- FLO-DRAW Flow diagram text & graphics editor 2 DISCS
- GRAPHIC ANIMATOR Create animated picture sequences
- PC DRAFT 2 like PC Paint 2 DISCS

## BOARD & CARD GAMES

- PC-OPOLY PC version of the well-known board game
- SCRABBLE Good implementation - updateable dictionary
- WORLD DOMINATION The classic game Risk and strategy
- SLEUTH Exciting murder mystery solving game
- CHESS & CHECKERS Quality graphics versions of games
- TWO BRIDGES Two versions of the famous card game
- GAMBLER'S DEN Craps, 21, Poker and Pontoon
- CARD SCHOOL Canasta, Gin Rummy, Heart and Lowball
- PATIENCE APLENTY Three different games of Patience
- PUB GAMES features Dominoes and Cribbage

## SIMULATIONS

- FORD SIMULATOR Test drive a selection of Ford cars 2 DISKS
- SOCCER GAME Manage your own soccer team to Div 1 UK
- BASSTOUR Absorbing fishing simulation for EGA
- PC-PRO GOLF High resolution golf 2 DISCS
- MEGALOPOLY Speculate and be a big business tycoon
- WAR GAME Strategy game based on war games rules

## ADULT ENTERTAINMENT

- ADULT PURSUITS Rather naughty Adult Trivia & Strip Poker
- EXPLOITS IN FANTASYLAND! An amusing and saucy romp UK
- PIN-UPS Selection of pin-up pictures to view or print
- LES GIRLES More naughty pictures to view or print
- ADULT HUMOUR Large collection of rather rude jokes
- ADULT ADVENTURES Bad-Bad, Drive-In and Fifi
- ADULT GAMES features rude Space Invaders & Sexware

## ARCADE GAMES

- STAR TREK puts you in command of the Enterprise
- POPCORN featuring superb graphics and fast action
- DRACULA LONDON role-playing game based on novel
- WANDERER based on Boulderdash theme For CGA or Herc
- TANK BATTLES Graphic action for two players
- CAPTAIN COMIC High quality animated graphics
- SNARF multi-level treasure-hunt game for EGA
- PINBALL WIZARD Five fast action pinball machines

## ADVENTURES

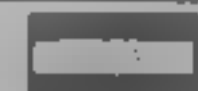
- COLOSSAL CAVE ADVENTURE The one that started it all
- DUNGEONS & DRAGONS Fascinating and complex adventure
- GOLDEN WOMBAT OF DESTINY British Infocom-style game
- JACARANDA JIM Escape from the planet Ibberspleen IV
- KINGDOM OF KROZ voted best game in Shareware
- RETURN TO KROZ The sequel - even more challenging

## JOIN THE INDEPENDENT COMPUTER USER GROUP GET YOUR SHAREWARE FOR JUST £2 A DISC (3.5" £3)

- ★ OBTAIN DISCOUNTS ON COMMERCIAL SOFTWARE
  - ★ RECEIVE A REGULAR MONTHLY NEWSLETTER
  - ★ USE OUR TECHNICAL SUPPORT SERVICES
- All this for just £15 a year (EC Countries)  
£18 (Non-EC Countries)

## GAME COMPENDIUMS

- CLASSIC GAMES Space Invaders, Pacman, Pacgirl, Ribit, Bricks, Donkey Kong, Q-Bert, Jumping Joe
- FUN AND GAMES Pango, Bouncing Babies, Elevator, Centipede, Pyramid, Dragons, Pac Osbit
- MAZING GAMES Treasure Hunt, Amaze, Polymaze, Castle, 3-Demon, Fire Chase
- LOST VEGAS One Arm Bandit, Roulette, Backgammon, Biorhythm, Keno and Casino featuring 4 more games
- SKILL & STRATEGY Frigate (Ships), Big Rig (Trucking simulation), Stock Exchange Game, Air Traffic Control
- COME IN PEACE Striker, Paratrooper, Round 42, Sopwith, Dragonfly, Landmine
- STAR WARRIORS Emergency Mission, Quantoid, Kamakaze, Rescue, Rockets, Spacewar
- PC CHALLENGE PC-Chess, Othello, Entrap, Hexplode, Kalah
- JUNIOR CHALLENGE 3D Tic Tac To, Dots, Draughts, Mastermind, Brainstorm, Gomoku and Four-In-A-Row
- MONOGAMES 18 games for Mono/Hercules PC's 2 DISCS
- KEEP THEM AMUSED Burger Blaster, Grime, Racer, Ninja, Caverns, Galaxy
- WIT YOUR PITS Battleships, Five-In-A-Line, Stock Game, Sales Game, Rogue (Artificial Intelligence), Eliza
- FACE THE ACTION Batalia (2 player), Tank (1/2 Player), Moonbase, Blot II, Gemini (can play 2-computer game)
- BLOCK & TACKLE Nemon, Qix, Xonix, Blockade, Ski-ing, Mummies, Lazer, Beast, Tron
- BASIC AMUSEMENTS Over 20 games to amuse and teach (2 DISCS)
- SPY CATCHER Master Spy, Raid Over Auschwitz, Hostages, Brimstone, Mad Scientist (Mad Scientist is for BASIC2)
- GOOD SPORTS PCTennis, Teed Off (Golf), Sailing (in the Bermuda Triangle), Armchair Quarterback (Football)
- SEEK & DESTROY Galactic Conquest, Daleks, Depthcharge, Lazy Monday, Intercept, Berzerk
- SPACED OUT Saucer, Crisis, Encounter, Xo and Space
- UP AND AT 'EM Nightmare, BitBat, Droids, Robotron, Spyder, Eggs, Stun
- PLAYTIME Lotto, Bingo, The Story of Eli, Motoman, Slug
- SPORTING LIFE PC-Golf, PC-Pool, PC-Bowl, Basketball
- ARCADIA Killer Bees, Mario Brothers, Snipe, Snakepit, Pearl, Wimps, RLogic
- WILLY AND HIS FRIENDS Willy the Worm, Willy II, Willy Screen Designer, Doctor Sleep, Disk Crash, Labbits & Voltrons





Fully featured portable from rising star Victor with a gas plasma display.

Power ★★★

Value for money ★★★★★

## ● ZENITH SUPERSPORT 286

0628 668588  
From £2,665  
80C286 CPU • 1Mb RAM •  
20/40Mb hard drive

Quality portable from Zenith featuring novel 'under the screen' drive arrangement providing easy access to floppy.

Power ★★★★★

Value for money ★★★★★

## ● ZENITH TURBOSPORT 386

0628 668588  
£3,320  
80386 CPU • 1Mb RAM • 40Mb  
hard drive • 1.4Mb floppy

Top of the range Zenith 386-based portable featuring a novel battery management system to conserve power.

Power ★★★★★

Value for money ★★★

## MODEMS

The last two or three years has seen a massive up-surge in the use of computer communications due to a relaxation of British Telecom controls and advances in technology.

## ● AMSTRAD 2400 (INTERNAL)

0279 454555  
£199  
V21 V22 V23 V22bis

Amstrad modems are held in high esteem throughout the industry for being cheap yet fully specified and reliable. The 2400 internal modem is no exception offering a large range of speeds at an amazing price. Fully recommended.

Power ★★★★★

Value for money ★★★★★

## ● AMSTRAD 2400 (EXTERNAL)

0279 454555  
£249  
V21 V22 V23 V22bis

As above but in a fitted case for use with any RS232 bearing computer. Again, fully specified and incredibly

cheap. Recommended.

Power ★★★★★

Value for money ★★★★★

## ● MIRACOM WS2000

0473 233888  
£108  
V21 V23

Entry-level modem which has enjoyed a high level of popularity amongst those wishing to try computer communications without a large investment. The WS2000 is a manual so you'll have to twiddle the knobs to get anything from it, but it's reliable and very cheap.

Power ★★

Value for money ★★★

## ● MIRACOM WS3000

0473 233888

£395

V21 V22 V23 V22bis

High end Miracom modem popular amongst corporate users featuring the fast 2400/2400 full duplex mode, full Hayes compatibility and a full complement of indicator LEDs.

Power ★★★★★

Value for money ★★★★★

## ● MIRACOM WS4000

0473 233888  
From £159  
V21 V23 (optional)V22

Upgraded, full automatic version of the very popular WS2000 modem, the '4000' features full Hayes compatibility, LED indicators and complete software control.

Power ★★★

**NEXT WEEK THE SHOPPING  
EXPRESS BUYER'S GUIDE TO**

# ST ESSENTIALS

## MAIN MEDIA

### BRANDED 3.5" DISKS

3M	£12.50
SONY	PER BOX
VERBATIM	OF 10

### BRANDED 5.25" DISKS

3M	£7.50
VERBATIM	PER BOX
TDK	OF 10

### BULK 3.5" DISKS FULLY GUARANTEED

3.5" DS/DD 135tpi  
(Sony/Verbatim)

20	£17.25
50	£34.00
100	£67.00
200	£132.00

Includes labels

### BULK 5.25" DISKS FULLY GUARANTEED

5.25" DS/DD 48tpi (BASF)

25	£7.25
50	£14.00
100	£27.00
200	£52.00

Includes envelopes,  
labels and tabs

### BOXES WITH DISKS

50 x 5.25" hinged lid lockable box with 25 DS/DD disks	£12.00
100 x 5.25" hinged lid lockable box with 50 DS/DD disks	£20.50
40/50 x 3.5" hinged lid lockable box with 20 DS/DD disks	£20.50
80/100 x 3.5" hinged lid lockable box with 50 DS/DD disks	£40.00

All prices include VAT, but please add  
£2.50 postage and packing.

**MAIN MEDIA, DEPT NCE  
FREEPOST, ANDOVER  
HANTS SP10 3BR**

**(0264) 333830 24 HOUR HOTLINE**

## COMPUTER AUCTION

**Saturday 24th March at  
Bowlers, Longbridge Rd,  
Trafford Park, Manchester.  
Sale starts 11.00 am, viewing  
and testing from 8.30 am.**

About 1000 lots of computer equipment including: IBM, Compaq, Amstrad, Toshiba, Apricot, Epson and other IBM compatibles. Apple and IBM software, printers, hard disks, modems, monitors, consumables etc.

For your catalogue ring:  
Computer Connections on:  
025481 3316.

P.S. Ring should you have any immediate computer requirements.



# Ladbroke Computing International

ST World  
'Best Dealer' 1989



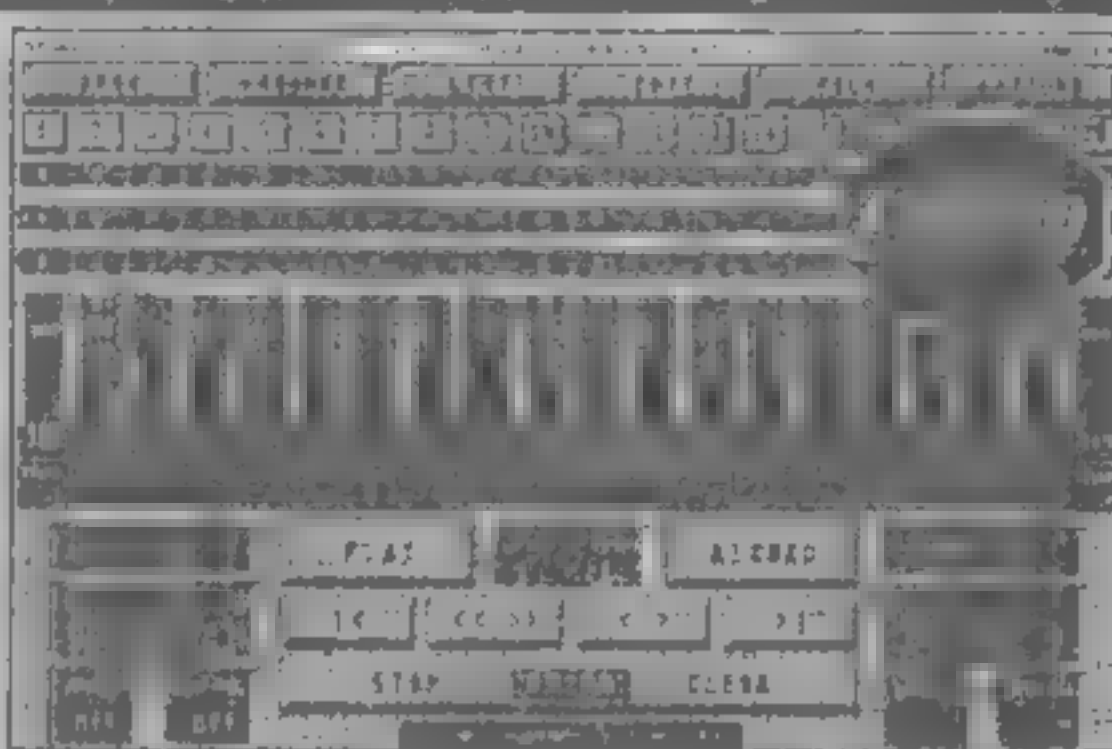
33 Ormskirk Rd, Preston, Lancs, PR1 2QP  
Open Mon. - Sat. 9:00 am to 5:00pm  
Dealer enquiries welcome.

Phone us for best price. We will try to match any price.

We were voted Best Dealer by the readers of ST World because we give our customers the best available service from both our shop premises at 33 Ormskirk Road and through our Mail order department at the same address. FOR THE BEST SERVICE AND PRICES, SHOP WITH US. All Software and Hardware is fully tested prior to purchase. All hardware is supported by on-site engineers in that quick turn-around on all repairs is guaranteed. There are no hidden extras. All prices include VAT. Delivery is free on orders over £100, in Mainland UK (add £5 for courier delivery). All prices are correct at time of going to press and are subject to change without prior notice. Please for up-to-date prices and advice, we are always happy to help.

## Midistudio 20 track ST Midi Sequencer

Midistudio is an attractively priced, 20 track Midi Sequencing package. It can record up to 682 bars per phrase (pattern) on up to 100 phrases. Any phrase can be placed on any track. Tracks can be soloed and muted and tracks and phrases can be named. Program numbers can be displayed in a variety of ways including 0-127, 1-128, in banks from a1-b88 or a01-b64. The Desk features sliders to set relative volumes on each track and you can even do a mix on the fly. Midistudio also has a clock to display the length of the last playback. Step time note edit functions are available including copy, split, merge, append, transpose, velocity editing (including a humanize function), full controller editing and different levels of quantizing. Midistudio works in medium and hi res and a demonstration disk is available for just £1.99.



## IMG Scanner Realtime 1880 Dpi

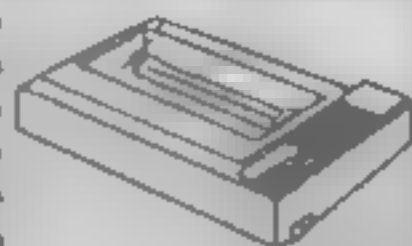
The IMG scanner is a realistic, low cost scanner which can offer high quality graphics digitizing for a tenth of the cost of other scanners. This simple unit plugs into the cartridge port of the ST and accepts scanned information via optical cables which fix easily to the head of any Epson compatible dot matrix printer. The software allows grey scales to be replaced with colours, 4 in medium resolution and 16 in low resolution and offers scanning resolutions of 75, 150, 216, 300, 360 and 1000 dots per inch horizontally. Best results are achieved with photocopies. Greater than screen resolution images are saved in IMG file format and can be edited with any compatible art package. Screen resolution images can be saved in Raw data, Degas or Neochrome formats and edited with compatible art packages.



## Midistudio Master 10 Midi Sequencer £129.99

### Best Selling Printers

Star L.C-10.	140/36cps	£ 159.99 *
Star L.C-10 Mk II.	180/45cps	£ 189.99 *
Star L.C-10 Colour.	7 colour	£ 199.99 *
Citizen 120D.	120cps	£ 134.99 *
Star L.C-24/10.	170/57cps	£ 219.99 *
Citizen Swift.	192/64cps	£ 319.99 *



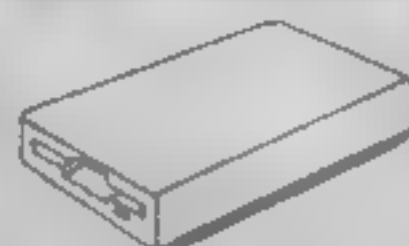
### Star Professional Series Printers

Star FR-10.	9 pin, 300cps draft, 76cps NLQ	£ 527.99 *
Star FR-15.	15" carriage version.	£ 688.99 *
Star XB-24/10.	24 pin, 80 cps SLQ, LQ.	£ 688.99 *
Star XB-24/15.	15" carriage version.	£ 907.99 *
Colour upgrade for Star XB & FR range.		£ 39.99 *
Star Laser Printer 8, 1 Mb RAM.		£ 1599.99 *
Star Laser Printer 8DB, Double bin version.		£ 2399.99 *
Atari SL-M804 Laser with 90 days on site warranty.		£ 1129.99

\* All these printers carry a 12 months on site maintenance warranty and come complete with Centronics cable. On site warranty UK mainland only. All printers are top quality products for the UK.

### Amiga Disk Drives

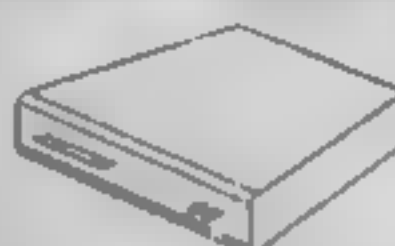
Cumana 3.5" CAS 354.	(ST)	£89.99
Ladbroke's 3.5" 1Mb	(ST)	£69.99
Cumana 1Mb internal.	(ST)	£74.99



Please note, ST's case requires modification for this internal drive.  
A/B boot switch, fitted. (ST) £24.99  
Cumana 3.5" CAX 354, disable switch etc. (Amiga) £74.99  
Ladbroke's 3.5", 1Mb, disable switch etc. (Amiga) £64.99

### ST & Amiga Hard Drives

Megafile 30	(ST)	£399.99
Megafile 60	(ST)	£599.99
Supra 10Mb	(ST)	£474.99
Third Coast 65Mb (ST)		£599.99
Third Coast 65Mb (Amiga)		£659.99
Vortex 40Mb (Amiga)		£499.99



### Ladbroke Computing Hard drives

We have a range of high quality ST drives at affordable prices. All have a minimum specification of: full metal case with push button on/off switch mounted on front and 60 watt PSU, Autark mechanism, has room, power connections and controller capability for second mechanism, external push button DMA device No. selection. The low power controller is full SCSI and can support up to 8 drives. The software includes Autoboot, up to 14 partitions on ST, 100% AHDI 3.2 compatible driver.

40HD 42Mb formatted, 11Ms, 64K on board cache.	£ 574.99
50HD 48Mb formatted, 30Ms average access time.	£ 499.99
55HD 54Mb formatted, 11Ms average access time.	£ 599.99
65HD 83Mb formatted, 28Ms average access time.	£ 699.99

### Monitors & Peripherals

Atari SM124 Mono	£109.99 *	Joysticks from	£ 4.99
Atari SC1224 Colour	£279.99 *	Portfolio add-on's from	£ 39.99
Philips 8871 Colour	£249.99 *	Trak ball (ST / Amiga)	£ 19.99
Philips 8802 Colour	£239.99 *	Mouse mats from	£ 5.99
Philips 15" FST, remote, Scart		Mouse/joystick extension	£ 5.99
input, Tv with 60 tuner presets, Amiga modulator			£ 19.99
timer and teletext	£259.99	Hawk scanner	£ 1249.99

\* Deduct £10 if bought with computer, Scart cable included

## Repair Centre & Upgrades For Atari

512K STFM RAM Upgrade fitted.	£ 74.99 *	512K STFM RAM upgrade, kit.	£ 49.99 *
512K STM RAM Upgrade, fitted.	£ 74.99 *	512K STE SIMM's, SIP's	£ 74.99 *
512K populated ST board, fitted.	£ 109.99	512K populated ST board, kit.	£ 99.99
2Mb populated ST board, fitted.	£ 249.99 *	2Mb populated ST board, kit.	£ 199.99 *
2Mb unpopulated ST board, fitted.	£ 59.99 *	2Mb STE SIMM's, SIP's	£ 249.99 *
STFM Blitter chip, fitted.	£ 39.99 *	STFM Blitter chip, kit.	£ 49.99 *
512K unpopulated Amiga board	£ 19.99	512K populated Amiga board	£ 59.99
512K unpopulated Amiga board+clock	£ 29.99	512K populated Amiga board+clock	£ 69.99

\* Please check configuration before ordering. Our Atari trained engineers can repair all hardware, including Amigas, in minimum time at competitive prices. Fitting prices quoted for machines not previously tampered with. All upgrades and repairs carry our 3 months parts and labour guarantee.

## Networking & Mac Emulation

- Network up to 32 ST's.
  - Up to 500 I/O between ST's.
  - 31K baud data transfer rate.
  - Full data correction.
  - File locking.
  - Networking permissions.
  - Allows up to 12 hard/RAM disk partitions.
  - Turn your ST into a Mac Plus.
  - Reads and writes to Mac disks.
  - Supports 99% of all packages.
  - Supports Hard drive and second floppy drive.
  - Compatible with STE.
  - 30% bigger screen area than Mac Plus.
  - 128K ROM's in stock.
- SGSnet Starter kit £ 149.95  
SGSnet add-on kit £ 99.95  
Spectre GCR £ 284.99  
With 128K ROM's £ 384.99

## Entertainment packs

520 STE Explorer	£279.99
520 STE Power pack	£369.99
1040 STE Hyper pack	£459.99
520 STE upgraded to 1Mb	£349.99
Amiga Batman pack	£369.99
Amiga Batman + pack	£399.99

### Phone for 520 and 1040STFM's

Power pack consists of Organizer software, First Basic, First music and games including Afterburner, R-Type, Gauntlet II, Super hangon, Space harrier, Mousetrap, Buggy boy, Super huey, Eliminator, Nebulus, Pacmania, Predator, Bombjack, Bombuzal, Xenon, Double dragon, Blacklamp, Outrun, Stargoose, Starway.

Hyper pack includes Hyper Paint art package, Hyper draw vector drawing package, Borodino strategy game and Metacorn Basic.

Batman + pack includes A500 Batman pack, mouse mat, joystick and the Tenstar games pack with Photon paint.

## Quality 3.5" Disks

Quantity	Unbranded		Sony Branded
	Loose	Boxed	Boxed
10	£6.99	£7.99	£9.99
100	£64.99	£74.99	£89.99

All disks are Sony, Maxcell or Kao and carry an unconditional lifetime guarantee. Please add 60p P&P for each pack of ten disks.

## Connectors & Discoveries

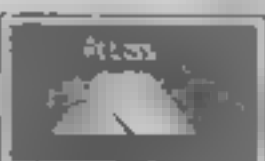
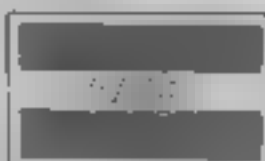
ST Centronics lead	£14.99	Monitor covers from	£4.99
Atari Monitor lead	£5.99	LC-10 printer cover	£7.99
Pair of Midi leads	£7.99	Hard drive cover	£4.99
Amiga Scart with sound	£14.99	ST cover	£3.99
Null Modem cable	£10.99	Amiga A500 cover	£3.99
8 bit Printer interface	£29.99	Mega 2 cover	£7.99
Atari DMA cable	£15.99	Disk drive cover	£2.99

Disk boxes from £4.99. Phone for care kits.

## Business & DTP Systems

Mega ST1 + SM124	£ 599.99
2Mb upgraded 520STE	£ 499.99
4Mb upgraded 520STE	£ 699.99
Portfolio (pocket PC)	£ 224.99
Atari PC4 (80286)	£ 1349.99
Atari PC5 (80386)	£ 2069.99
DTP Mega 2 pack	£ 1674.99
DTP Mega 4 pack	£ 1999.99
A4 Flat bed scanner	£ 449.99

This high quality 200dpi flat bed scanner is also a thermal printer and photocopier. It can scan high resolution images in up to 16 grey scales. Software runs on Amiga and ST (ST software includes editor) and requires 1Mb of memory. This is probably the most cost effective piece of office equipment you could own. Centronics cable included.



(0772) 203166

Fax 561071

Ladbroke Computing International is a trading name of Walton Marketing Limited. Copy date 21/02/90





# BEST PRICES!

"Well done" "Amazing prices" "Very quick delivery" - Mr T.N-S. Bucks

## ATARI PC4

286 AT

- \* 80286 AT Compatible
- \* 12 Mhz Clockspeed
- \* 1 Mb RAM (expandable 8Mb)
- \* 1.2 Mb 5.25" floppy disk
- \* 60 Mb hard disk - 28 ms
- \* VGA (on motherboard)
- \* VGA 14" Colour Monitor
- \* Supplied formatted, partitioned and installed with MS DOS
- \* Supplied with Windows 286
- \* Extra drive (1.44MB 3.5") - £80 + vat
- \* 12 Months On Site Maintenance

(8 hr call out by the OFFICIAL Atari maintenance company)

\*\*\* Phone Now For More Details \*\*\*

**£1415.00**

excluding vat ( £1627.25 inc vat)  
including courier delivery

## HIGH DENSITY BLANK DISKS

We sell KAO unbranded high density (1.44Mb formatted) disks which are supplied with labels and guaranteed. All prices include VAT and delivery.

Quantity x 10	£15.50
Quantity x 20	£28.50
Quantity x 30	£39.99
Quantity x 50	£62.00
Quantity x 100	£117.00

## WE PART EXCHANGE PC SYSTEMS, ATARI ST ETC

CALL NOW FOR PRICES!

## Panasonic KXP1124

- \* 80 col, 24 pin multi mode printer
- \* 160 cps, 53 cps NLQ at 10cpi
- \* 192 cps, 63 cps NLQ at 12cpi
- \* Adjustable push/pull tractor
- \* Front, rear and bottom feed
- \* 10, 12, 15, 17, 20cpi + proportional
- \* Front panel selection - no dipswitch
- \* 2 draft, 5 NLQ fonts standard
- \* Paper Parking
- \* A4 Landscape and Portrait
- \* Epson LQ and IBM Pro compatible

**£259.00**

with 12 Months On Site Warranty  
FREE I and VAT and Delivery



## MANNESMANN TALLY

### MANNESMANN TALLY MT81 PRINTER

- \* 9 Pin Dot Matrix
- \* Parallel I/face
- \* 155 cps high speed
- \* 130 cps draft
- \* 26 cps NLQ
- \* Epson/IBM compatible
- \* Tractor feed
- \* Single sheet feeder
- \* Paper Parking
- \* Includes cable

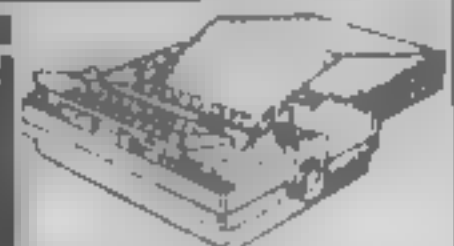
\* 1 YEAR ON SITE WARRANTY FREE \*

**£144.95**

INC VAT AND DELIVERY

REPLACEMENT MT81 RIBBONS  
£3.95 EACH INC

## CITIZEN Swift 24



- \* 24 Pin Printer
- \* 102 cps draft
- \* 64 cps LQ
- \* Epson LQ compatible
- \* IBM compatible
- \* Nec P6+ character set
- \* 8 resident LQ fonts
- \* 80 column
- \* Tractor feed
- \* Single sheet feed
- \* Parallel interface
- \* Supplied with lead
- \* 7 Colour option available extra
- \* Beats LC24/10 II
- \* RRP £447.35

\* 1 Year On Site Warranty FREE \*

**£314.95**

INC VAT AND DELIVERY

Swift 24 Colour Kit - only £34.95 inc

## PC MODEM CARD

### AKHTER MDM2400 MODEM CARD

(Identical to Amstrad 2400 Modem card!)

- \* V21, V22, V22bis & V23
- \* Auto Answer / Auto Dial
- \* Pulse or Tone Dialing
- \* Hayes Compatible
- \* Automatic mode selection
- \* Mirror II Commands software
- \* Call progress monitor
- \* Plug straight into PC
- \* Full instructions
- \* Standard BT connector
- \* HAST Approved
- \* RRP £228.85 inc vat



**£134.95**

including VAT and delivery



## COMMODORE

The new Commodore PC Starter Pack is aimed at both the inexperienced and the experienced PC user. Containing everything the PC user needs and wants the Starter Pack includes, in a stunning eye catching box:

- \* CPU and AT style keyboard
- \* MS Dos & Tutor
- \* Typing Tutor
- \* Integrated :- Wordprocessor
- \* Database
- \* Spreadsheet
- \* Monitor
- \* GW Basic
- \* A-Z of Computer Jargon
- \* Tutorial Video
- \* 90 Day Software Hotline
- \* 12 Months On Site Warranty

### The Commodore PC10 & PC20 Technical Specification :

- \* 8088 8/16 Bit CPU
- \* 4.77 7.16 9.54 Mhz (switchable)
- \* 3 Expansion slots
- \* 360K 5.25" Disk Drive
- \* RS232 Serial Port
- \* Mouse Port
- \* Commodore 1352 Mouse ( £29.99 + vat ) available extra
- \* 8087 (optional)
- \* 640K Ram (expandable)
- \* Clock/Calendar
- \* 20Mb Hard Disk (PC20 only)
- \* Parallel/Centronics Port
- \* AT Keyboard

### The Commodore PC10 & PC20 Prices :

	MONO	CGA COLOUR	VGA MONO	VGA COLOUR
PC10 SD (Single Disk)	520.00	660.00	680.00	770.00
PC10 DD (Dual Disk)	565.00	710.00	730.00	820.00
PC20 HD (20Mb H Disk)	730.00	865.00	910.00	999.00

All Commodore PC10 & PC20 prices exclude VAT and delivery  
Please add £15 + VAT for COURIER DELIVERY

## SOFTWARE

TIMWORKS DTP - Atari ST	69.99
FIRST WORD PLUS - Atari ST	56.99
PROTEXT V4.2 - Atari ST	69.99
VIDI ST - Atari ST	86.99
DEGAS ELITE - Atari ST	19.95
METACOMCO BASIC - Atari ST	9.99
DATA MANAGER PRO - ST	29.99
DELUXE PAINT 3 - Amiga	59.95
PHOTON PAINT 2 - Amiga	39.95
MUSIC X - Amiga	172.95
VIDI AMIGA - Amiga	99.99
DATA MANAGER PRO - PC	51.50
WORDSTAR EXPRESS - PC	92.00
SUPERCALC 3.21 - PC	92.00
INFOMASTER - PC	66.70

## PC MOUSE

The DEXXA PC MOUSE comes with :

- \* 9 pin connector
- \* 9 to 25 pin adaptor
- \* Mouse Mat
- \* Mouse Driver Software
- \* DEXXA Menu Software
- \* Preprogrammed Pop Up Menus
- \* Users Manual
- \* DEXXA Paint III Graphics Software

100% Microsoft Compatible  
For use with IBM PC  
XT AT PS/2 or compatibles

only **£37.50 + vat** (£43.13 inc)



# BEST PRICES!

"I have never dealt with a better mail order company!" - Mr K.N. Leeds

## BLANK DISKS

All of our 3.5" blank disks are KAO unbranded, grey colour, guaranteed double sided, double density & are all supplied with labels.

	3.5"	5.25"
Quantity x 10	£6.85	£3.28
Quantity x 20	£12.99	£6.34
Quantity x 30	£18.99	£9.38
Quantity x 50	£29.99	£14.95
Quantity x 100	£56.99	£27.95

## CITIZEN Swift 24



- \* 24 Pin Printer
- \* 102 cps draft
- \* 54 cps LQ
- \* Epson LQ compatible
- \* IBM compatible
- \* Mac PS+ character set
- \* 8 resident LQ fonts
- \* 80 column
- \* 1 Year On Site Warranty FREE \*
- \* Tractor feed
- \* Single sheet feed
- \* Parallel interface
- \* Supplied with lead
- \* 7 Colour option available extra
- \* Starts LC24/10 II
- \* RRP £447.35

**£314.95**

INC VAT AND DELIVERY

Swift 24 Colour Kit - only £34.95 inc

**WE PART EXCHANGE PC SYSTEMS, ATARI ST, PRINTERS, MONITORS**  
CALL NOW FOR PRICES!

## ATARI

### PORTFOLIO PC

Portfolio Pocket PC	£229.95
Smart Parallel Interface	£38.95
Smart Parallel Interface - with parallel cable	£41.95
32K Memory Card	£46.95
64K Memory Card	£81.95
128K Memory Card	£118.95
Finance Software Card	£47.50
PC Application Software	£47.50
Utilities Software Card	£47.50
Serial RS-232 Interface	£56.95
Super Memory Expander - (expands to 640K)	£164.95
Portfolio Card Drive	£64.95

## ST MIDI

LATEST and ORIGINAL versions #  
C-Lab Creator SL  
C-Lab Notator SL  
C-Lab Unitor  
Steinberg Cubase V1.5  
Steinberg Soundworks (If we print 'em ---- you won't believe 'em !!)  
Steinberg Synthworks  
Digital Muse Virtuoso  
Dr.T KCS 17MPE  
all other top packages available.

\*\*\* SPECIAL OFFERS \*\*\*

PRO 12 V1.1 - PHONE

PRO 24 V3 - PHONE

PRODIGY - only £99.95

FM MELODY MAKER - £57.95

## PHILIPS CM 8833

14" Medium Resolution Colour Monitor. RGB/RGBI, composite and audio inputs. Stereo speakers and green text mode. CGA compatible. Supplied with one of four leads: Atari STFM / Atari ST E Stereo / Amiga A500 Stereo / PC Lead for CGA card.

**£259.00**

inc vat + courier delivery

## Star

All Star prices include VAT, parallel lead, delivery and 12 Months On Site Warranty

Star LC10 Mono	£169.00
Star LC10 Colour	£219.95
Star LC24/10	£259.95
Star XB24/10	£499.95
Star XB24/15	£559.95
Colour Upgrade XB Range	£34.95

Genuine Star LC10 Ribbons...

8 x Black Ribbons	£15.95
10 x Black Ribbons	£32.95
8 x Colour Ribbons	£24.95
10 x Colour Ribbons	£47.95

13 PIN DIN PLUG (ST Monitor)	£1.95
14 PIN DIN PLUG (ST Disk Drive)	£2.25
14 PIN DIN SOCKET (ST D/Drive)	£2.95
SCART PLUG	£1.95
PARALLEL LEAD (ST/PC/AMIGA)	£3.99
MOUSE MAT (Hi Quality)	£3.50
JOYS/MOUSE EXTENSION LEAD	£4.75
ST REPLACEMENT MOUSE LEAD	£3.75
ST MONITOR SWITCH BOX	only £14.95

## ATARI STE

UPGRADES!

All STE packs include:

- \* Atari 520STE Computer
- \* RAM upgrade fitted internally
- \* Hyper Paint graphics software
- \* Hyper Draw graphics software
- \* Borodino simulation software
- \* Metacomco ST Basic
- \* Prices include VAT & courier delivery

The AMAZING prices:

520 STE 512K RAM	£279.00
520 STE 1MB RAM	£329.00
520 STE 2MB RAM	£429.00
520 STE 4MB RAM	£599.00

### D.I.Y. STE RAM UPGRADES:

520 STE to 1MB (2 x 256K Cards)	£62.50
520 STE to 2MB (2 x 1MB Cards)	£179.95
520 STE to 4MB (4 x 1MB Cards)	£359.95

Atari SM124 Mono Monitor	£99.95
Atari Megafile 30 Hard Disk	£429.95
Atari Megafile 60 Hard Disk	£595.00
Monitor Switch Box	£14.95
STE Stereo Scart Lead	£12.95

## ATARI HARD DISK PACK

- \* Atari 2MB Ram STE Computer + Mouse
- \* Atari SM124 Monochrome Monitor
- \* Atari Megafile 30 Hard Disk Drive
- \* Hyper Paint, Hyper Draw, Borodino
- \* Courier Delivery

**£805 + vat**

4MB STE HARD DISK PACK -  
£955 + VAT

## ATARI 4MB LASER PACK

- \* Atari 4MB Ram STE Computer + Mouse
- \* Atari SM124 Monochrome Monitor
- \* Atari SLM804 Laser Printer
- \* Cumana External Disk Drive
- \* Optional Software:
- (i) Timeworks DTP
- (ii) C-Lab Notator
- \* Hyper Paint, Hyper Draw, Borodino
- \* Courier Delivery
- \* Add £429.95 for Megafile 30 Hard Disk

ATARI 4MB STE LASER PACK  
(with Timeworks DTP)

**£1950.00 inc vat**

ATARI 4MB STE LASER PACK  
(with C-Lab Notator)

**£2265.00 inc vat**

## BEST PRICES

(DEPT NCE), UNIT A, GRAFTON PLACE,  
WORTHING, WEST SUSSEX. BN11 1QX



**(0903) 700714**

YOU CAN PLACE YOUR ORDER 24 HOURS A DAY



All prices include VAT and delivery unless otherwise stated. Goods despatched same day whenever possible.

All prices are subject to change without notice. BEST PRICES only supply original equipment and not grey imports. All of our equipment is fully guaranteed. We stock all types of computer hardware and software - give us a call for our BEST PRICES.

Mail order only, callers and collections only by prior arrangement with us. Thank You.

NEXT DAY DELIVERY BY COURIER (MANY PRICES INCLUDE THIS ALREADY!)

ADD £5.00 INC VAT FOR ALL ORDERS OVER £100.00 INC VAT

ADD £7.50 INC VAT FOR ALL ORDERS UNDER £100.00 INC VAT



# SHOPPING EXPRESS READER ADS

There are great bargains to be had in our reader ads section, but remember to check before you buy - we cannot be held responsible for the quality of the goods on offer!

## ● FOR SALE

**CAMERA** for digitising Panasonic CCTV WV-1410 High Resolution, ideal for Amiga, excellent condition £135.00 only free Digiview 2. Ring 0539 84670.

**M.S.X.** Toshiba H.X.10. Computer, complete with manuals cassette recorder joystick games, hardly used, very good condition. £50 o.n.o. Tel 0639 887929. After 5pm.

**AMIGA** 500 memory expansion double drive games, one joystick, disc box, mouse mat, modulator will split. Offers, Royston 0763 248186.

**BBC B** Series 7, fitted Rom-Board, with GXR Printmaster W.P. Database Roms Tape Drive, 40/80 Disc Drive, Green Screen Monitor, Modem. All manuals and cables £250. Phone 0293 29604.

**ATARI** ST originals £10, Falcon, Operation Wolf £5, Alien Syndrome, Marble Madness, Outrun, Virus, Elemental, Where Time Stood Still. Phone Steve 0530 243096, after 4 pm.

**ATARIST** software, all original, Falcon, Hard Drivin, Elite, Starglider 2, Degas, Super

Hang-on, Timeworks, Outrun, Driller, Backlash, Space Harrier, Supersprint, plus more from £5 - 0726 64014 - evenings

**TATUNG** Einstein, with WP, S/Sheet D.B.M.S. Software, £75 Colour Monitor 14 inches, needs Split Synch input. Hardly used, £85. Diablo 630 D/Wheel £135 - 051-632 6711

**24PIN** Colour Printer, Citizen HQP40, 200CPS, letter quality as new, £200 Contact Jon - 6, Upton Road, Chichester, West Sussex, PO19 2QQ or Tel. 0243 774767.

**AMSTRAD** CPC 464 Colour Monitor, £300 plus software, loads of mags and books, and back-up copier (Imager) Tel 0279 34906, (Harlow, Essex) £230 o.n.o.

**SINCLAIR** +3/48K Hardware and Software for sale, very cheap prices. Phone after 4pm, 0494 716404 Ask for Peter.

**AMIGA** Games for sale, boxed original at reasonable prices, must Ring St Helens 0744 54859.

**CITIZEN** 120D DMP, excellent condition, suitable for ST/Amiga, good quality NLQ printing, price £70 o.n.o. Tel Windsor 0753 864382.

**C.64** 1541 Disk Drive, C2N, plus lots good software R.P.G.s Adventures utilities and

arcades worth over £1000 for sale at £280 o.n.o. Tel Southend 0702 331560.

**EPSON** GX80 Printer Manual wanted, will pay good price. Help my redundant printer come to life Tel 0642 310957

**FERRANTI** PC (IBM Comp) Twin floppy disc drives, mono display, manual and software £300 o.n.o. Tel 0273 464575 for details

**CBM64** 1541 Disk Drive Printer, Simon's Basic, W/P. Games, plenty books, £150-ish - Do yourself a favour, phone Derek 0387 811235 - evenings only

**AMSTRAD** CPC6128 and Colour Monitor, plus Instruction Manual, Serial Printer, and Utilities Software £175 o.n.o - Ring 0932 874165

**SPECTRUM** ZX+48K with joystick, programmable interface Manuals etc, 90+ games including Robocop, Double Dragon, Outrun Afterburner, £60 o.n.o. 0282 35435

**MSX** Konami Cartridges Road Fighter, Soccer, Yie Ar Kung Fu - £7 each. Cassette737 Flight Simulator, The Wreck - £5 each Phone Scott 0862 810662 - Evenings.

**AMSTRAD** 464 & green monitor, excellent condition, joysticks, £500 Original software, manuals, "welcome" software, ideal as first-time computer Only £280 o.n.o. Tel 0484 652267 - evenings.

**SEIKOSHA** GP100 Printer Plus OK Tronics Interface and extra Ribbons. £45 - Interested? 0827 285987

**AMSTRAD** CPC Firmware Manual, DDI-1 Disk Drive, Rombo and Rom/Disk Software S.A.E. for list Richard Evans, St Edmunds Hall, OXFORD, OX1 4AR

**COMMODORE** 64, Disk Drive, C2N, Joystick, £600 + software (business and

games), mouse, magazines. Bargain - £180 - phone 0823 432564, ask for Edward.

**PUSION**, Savage, Ferrari Formula One, FF only 1.2 Amigas, Amiga originals - £20 the lot - phone Ian after 7pm 01-556 9147.

**ATARI** 800XL Computer with Omnimon Upgrade 1050 Drive with Hyperdrive Upgrade Books Disks, Digitizer, Touch Tablet Complete System - £175 o.n.o. - Tel 0202 632004 Between 5pm-7pm.

**ATARI** ST Games - originals Falcon, Elite, Starglider Two, Driller, Fun School Two £8.00 each. Quantum Paint, Sidewinder. £5.00 each. Tel 0737 248704 - Reigate, Surrey.

**SPECTRUM** Software (originals) 20 games cassettes, £22 - postage included. "Blast" Compiler, (Opus Disc) £3.50 - Tel 0258 880394.

**C64**, 1541 Disk Drive, C2N tape unit, Lazer Cartridge, Trippler Printer Interface, £1000's good quality software (RPG'S Serious, Adventures, Shootemups) - £260 ono. Tel Essex 0702 331560.

**COMMODORE** Disk Drive Oceanic OC-118 with Disks, Games and Geos only £70 Tel Horsham, 0403 68276

**C64C** - 7 year old, Joystick, 2 Patassettes Power Supply Well over £300 worth of software including Great Giana Sisters, Turbo Outrun. Sell for £280. Phone 01-399-0734.

**SAM COUPE** for sale, Graphics Package Flash, Demo Tape, Utility Tape, Manual and all literature. Also 10 Coupe compatible spectrum titles £185. Ring 0278 780796

**AMIGA** Disk Drives, two. Internal fitting, 2 months use, perfect working order - £50 each or two for £80 or swap for Microtex Teletext Decoder. Tel 031-331 2110.

## COMPUTACHAT

Are you a computer games player, programmer, musician or artist?

Would you like to talk to others like you to swap hints, tips, pokes or even software (must be originals or PD).

Are you interested in forming a group to buy blank disks or cassettes in bulk or would you just like to chat in general about computer orientated activities.

**RING COMPUTACHAT ON**

**0898 338939**

EXPERTS ON HAND TO ANSWER ADVENTURE QUERIES

**TME PLC**, Box 54, South West Manchester M15

Calls charged at 25p/min "cheap" rate - 38p at all other times

## ADVENTURE HELPLINE

Do you play computer adventures? Have you ever been faced with a seemingly impossible situation?

**WE CAN HELP**

Our adventure rescue team work 7 days a week until midnight and will be pleased to answer your queries. We offer help with any games or any computer - so if you are tearing your hair out ring this number NOW!

**0898 338 933**

T.M.E Plc 10b Hulme Hall Road, Manchester M15 4LY

Calls charged 25p min "cheap" rate/38p at all other times

**LOOK! AMAZING OFFERS**

**3 1/2" DD DISK**

**100% Certified Error Free**

**Inc Labels**

**36p exc. VAT**

**3 1/2 DISK BOX**  
40 Cap £4.00  
80 Cap £4.50

**AMIGA MAXI PLAN**  
OUR PRICE £50.00

**TOP QUALITY DISKS**

**3 1/2 DS/HD 115p**  
**5 1/4 DS/DD 28p**  
**5 1/4 DS/HD 46p**

**AMIGA SUPERBASE PERSONAL II**  
OUR PRICE £50.00

**SAME DAY DESPATCH**

AMIGAS	LOOK	ATARIS
Batman Pack.....£358	<b>JOYSTICKS</b>	Power Pack.....£349
A500 + Tenstar Pack..£375	<b>Black Cruiser</b>	Explorer Pack.....£258
A500 Class of the 90's £495	<b>£7.50</b>	Ultimate Pack.....£429
Hi Res Colour Monitor.£249	<b>Zipstick £10.80</b>	Portfolio.....£222
	<b>Quickshot</b>	720K Disk Drive
	<b>£4.50</b>	with PSU.....£68.00
		<b>★GAMES!★</b>
		<b>NOW AVAILABLE</b>

ADD £3.25 P&P per disk order. ADD £8 next day delivery.  
On Amigas Ataris ALL PRICES INCLUDE VAT

**CALL OR SEND CHEQUE TO B.C.S LTD**  
**649 DITCHFIELD ROAD, BRIGHTON BN1 6J**

**0273 506269 24 hours**



**BBC B** 40/80 Disk Drive, Epson Printer, Philips Monitor, Rom/Ram Expansion Board, AMX Mouse, Super Art, Pagemaker, etc. Roms, Software, Joystick, Books. £440 Tel 01-904 7376.

**SAM COUPE** by MGT. Includes all tapes and literature, plus 10 Coupe Compatible Spectrum Titles, buyer to collect or pay P+P, Ring 0278 780796.

**CPC** Stuff-Multiface two £24. 6128 Speech Rom + Speakers £17. Hisoft 'C' £20. Prices include P+P. Contact: M Pinder, 4, Wham Hey, New Longton, Preston, PR4 4RU.

**TANDY** 102 Laptop £150. Colour Graphic Printer £35. Acoustic Coupler £35. Kaga Vision 2 Colour Monitor £140. Spectrum + ZX £60. Amber Monitor £30. Recorder £15. Tel Peter 01-947 8486.

**NEW** Computer Express Magazines Numbers 1-61. Immaculate condition. Buyer collects £20 ono. Call after 6pm - Shrewsbury 874660.

**ATARI ST** ■ memory Hi-RES Mono Monitor, two Disc Drives, GFA Basic Pascal Compiler and lots more £390 ono. Tel Steve 0932 824563 - office hours.

**SEGA** Mega Drive, 1 month old Pal £100.00. Phone Flax Bourton 3466. Ask for Nigel.

**PC** Engine, 1 month old £100.00. Phone Flax Bourton 3466 and ask for Nigel.

**SPECTRUM** joystick interface and m'switch joystick - £13 tel 0695 32818.

**COMMODORE 64C**, 1570 disc drive, mouse, Action Replay mks 100s games, disc & tape, disc box, joystick. A bargain ■ £350 o.n.o. Tel: (0253) 899506.

**TOSHIBA** HX-P550 Printer, Centronics, MSX

compatible, brand new, unused £120 o.n.o. Also some MSX Word Processors etc. Tel: 01-531 6146 evenings

**CBM64** kit for sale, lots of bits cheap. Send S.A.E. for list. A ■ Foster, 24 Pansy Road, Bassett, Soton, SO2 3GR.

**COMMODORE C64**, C2N Datasette, 1541 disk drive, laser, trippier plus loads software Geos, R.P.G.'s, Adventures, Shoot 'em ups, Wordpro's, Graphics Packages, Music £275.00 o.n.o. (Southend) 0702 331560.

**ST** originals old but good and Verbatim disks for sale £30 inc. p&p. Tel: 0250 5108.

**TANDY** Pro 34, hardly used, unwanted Xmas present. Phone ■ 583 5459 9-11am only £120 (rrp £245) o.n.o.

**1040STFM**, second drive, forty games, STOS, Quantum Paint, plus others, all boxes, leads, etc. v.g.c. £600 o.n.o. Buyer collects. Ring (0245) 353688 and ask for Mark.

**COMMODORE 64**, C2N Cassette, 1571 disk drive, Brother printer, software, mouse, Lightpen, manuals, books, magazines, v.g.c. Cost £1200, sell £350 o.n.o. (0787) 77842 Suf-folk.

**DRAMS** - new 16x 256 Kbit (0.5Mb) which I'm told work with Amiga/ST. Numbers 64621A-15 or MSM4256P sale or interesting swap. Kyle, 25 Albyns, Langdon Hills, Essex, SS16 6LH.

**SPECTRUM** software Hisoft Basic £10, Qualitas fonts £4, hundreds of games including Robocop, Batman, Op. Wolf, etc ■ originals in v.g.c. Prices £1 - £3. 01-572 1165 Mike, Hounslow.

**SPECTRUM** hardware, Cheetah Midi Interface, three Drumkits for Spectrum, Currah Microslot, ZX Print III, Printer Interface. All in v.g.c. 01-572 1165 - Hounslow.

**TRACKERBALL** for ST, fits mouse socket, two independent buttons, runs all mouse software but does not need desk space. Only £15 phone Dave 0635 297701

**GREAT** CBM 64 and disk drive, Datasette. Lots of software (games and business) RRP over £350. Offers around £200 - phone after 3.30. James (0455) 557734.

**PRINTER** lead for Amstrad 6128 £5. "Marble Madness" cassette £3. Post paid, also 6 books on Electron computing. Offers please. Durham 091-386 1493.

**AMSOFT** logo guide £4. Adv. 6128 Computing book £5. CPC 3-inch disks, "Snooker" £3. 4 game compilation £4. 3 Blanks £4 + post. Durham 091-386 1493.

**ATARI 520STFM** in excellent condition with all leads and manuals etc. original packaging, complete with over £150 of recent games. Only £250 - phone (0634) 30687.

**BBC B**, colour monitor, Twin disk drives, mouse, joystick and software £390. Tel: Brown, (0703) 552768.

**MICROSOFT** windows version 2 for IBM PS/2 & compatibles. 3.5 disks, box unopened, £35. IBM DOS version 3.30 3.5" disks ■ manuals, unused, £25. AA mags, Bristol (0272) 691471.

**MASTER** 128k, dual 5 1/4 DS (40-80) D/drive, Master ROM, + others, games, loads s/w, manuals, Plinth. Excellent condition £500. Phone 01-805 2458 for details (ask for Chris).

**16K** DRAMS and Eproms all onboard disc control circuit open to reasonable offers. (075485) 668.

**AMIGA** one mega upgrade and one mega game. Cost together £115, yours for £70. Phone: (0689) 30183 anytime Hurry!

**£45. £45.** Olivetti PR15 Dot Matrix Printer, Parallel interface, ST compatible, good working order. Phone Steve (0923) 677501 only £45.00

**OPUS** PCIII Turbo, 1 Mb RAM, 20Mb Hard Disk, Multi-function display I/O card, Hercules Mono Monitor, 1 Heol-Y-Geifr, Pencoed, Mid Glamorgan, CF35 6UH. £450.

**AMSTRAD** PCW8512 with Supercalc ■, dBase II, spare ribbons and 25 new blank discs. All boxed as new! Only £300! Phone Paddy on (0225) 700036 evenings.

**DISKS**, Maxell HD DS/DD 3.5-inch 10 box at £15 per box or £130 the Lot. Unwanted gift as wrong size Enquiries - Nigel, Flat 3, 3 Fairmile, Henley, RG9 2JR.

**ST** original software from only £5 Chase HQ. Hard Drivin, Robocop, Running Man, Space Quest III, King Quest 1,2,3,4, plus more. Phone Russ (0732) 844175.

**SPECTRUM** serious software and utilities on +3 disc, Microdrive and cassette. S.A.E. for list - Kelvin McWha, 5 Argameols Close, Southport, Merseyside, PR8 6LH. Phone (0704) 42664 + loads of Spectrum books.

**AMSTRAD** CPC 464 With colour monitor and 133 games, 2 joystick all for £400 o.n.o. ■ (0592) 759035.

**MICRODRIVE** plus interface 1 and 20 boxed cartridges for Spectrum £50. Phone Learning-ton Spa (0926) 334151.

**TANDATA** TD1604 Prestel viewdata terminal Thomson 14-inch mono monitor, offers or exchanges considered can deliver. (021) 749 2320.

**SINCLAIR** ZX81 computer plus extra 16K memory pack and small number of games £25 o.n.o. Phone (0252) 546412.

## COMMODORE AMIGA A500

### BATMAN MOVIE PACK

Amiga A500, Workbench 1.3, Mouse, Extras Disk, Tutorial Disk, Owners Handbook, Basic Handbook, Mouse Mat, TV Modulator, Deluxe Paint 2, F18 Interceptor, New Zealand Story, Batman.

ONLY  
£369.95

### NEW!! MONSTER PACK

Amiga A500, Workbench 1.3, Mouse, Extras Disk, Tutorial Disk, Owners Handbook, Basic Handbook, Mouse Mat, TV Modulator, Paint Package, F18 Interceptor, New Zealand Story, Batman, Word Processor, Music Package, Tile Game, Commodore Sports Bag, Ten Blank Disks, Disk Box Holds 80 Disks, Vinyl Dust Cover, Microswitch, Joystick

ONLY  
£399.95

ALL AMIGA PRICES INCLUDE VAT, FITTED PLUG AND DELIVERY

## ATARI 520ST

### EXPLORER PACK

Atari 520ST Mouse, Owners Handbook, Metacom Basic Rev D, Sourcebook + Tutorial.

ONLY  
£279.95

### POWER PACK A

Atari 520ST Mouse, Owners Handbook, First Basic, First Music, Business Organiser Software, 20 Great Games, Atari CX40 Joystick

ONLY  
£359.95

### POWER PACK B

Atari 520ST Mouse, Owners Handbook, First Basic, First Music, Business Organiser Software, 20 Great Games, Atari CX40 Joystick, Vinyl Dust Cover, Twin Joystick, Extend Lead, Disk Box for 80 Disks, Ten Blank DS/DD Disks, Second Joystick

ONLY  
£389.95

INCLUDING VAT AND DELIVERY

Plus FREE!! with any of the above Atari Packs a Superb Software Starter Pack comprising WordProcessor, Spreadsheet, Spellchecker, Word Count Program, Neochrome, Mono Monitor Emulator, Database Towers of Hanoi Game, Virus Killer, Sensor Game, Fruit Machine Game.

PLUS FREE with all Atari computers, Hyper Paint, Hyper Draw, Borodino RRP £79.00. Only whilst stocks last.

## PERIPHERALS

STAR LC10  
COLOUR  
PRINTER

£209.95

STAR LC10  
PRINTER

£169.95

CUMANA  
CAX 354  
AMIGA  
DISK DRIVE

£89.95

PHILIPS  
CM8833  
COLOUR  
MONITOR

£249.95

CITIZEN  
120D  
PRINTER

£138.00

CUMANA  
CSA354  
ST  
DISK DRIVE

£92.95

ALL PERIPHERAL PRICES INCLUDE VAT DELIVERY AND ANY LEADS NECESSARY  
TO CONNECT TO YOUR COMPUTER (PLEASE STATE)

## SPECIAL OFFERS - WHILST STOCKS LAST

Commodore A501 RAM Expansion £99.95 Deluxe Paint ■ Amiga £19.95  
Hyper Draw Atari ST £9.95 Hyper Paint Atari ST £9.95  
The Works Platinum Edition Amiga RRP £149.95 only £99.95

## MAIL-CENTA

Campanell Street, Belper, Derby. DE5 1AP. Tel: 0773 333333

All prices include VAT and Delivery. However for orders under £10.00

add a £5.00 handling charge. Personal orders delivered at our discretion.

All items despatched same day whenever possible.

Cheques may require a seven day clearance period. Prop. Martin Bridges

# BUILD IT YOURSELF!

## MOTHERBOARDS

### XT TURBO

12MHz, V20, 0k, 8 slots. Small size, takes 256k x 4 DIL.

£62.10 + £4.50 p&p

### AT TURBO

12MHz, 0k, up to 4 M on board. Seven slots, takes 256k x 1, or 256k x 4, or 1M x 1.

£158.00 + £4.50 p&p

### AT TURBO PLUS

12MHz, up to 4M on board. Eight slots, takes 256k x 4 or SIPS. EMS fitted.

£188.00 + £4.50 p&p

## STARTER SYSTEMS

Both include ■ full 1 Mbyte of RAM, 101/102 key keyboard, a 12" mono monitor, Hercules graphics, DR-DOS and a parallel port. Both run at 12MHz clock speed and have eight slots.

AT mini-tower £749

XT system £459

Delivery included

## CASES

### XT/AT CASE

Space for three 5.25" floppy/hard disk drives and one 3.5" drive.

£44.50 (+ £6 p&p)

180W PSU £44.85 +

£3

### DE-LUXE CASE

Same disk space but prettier! Speed display.

£65.00 (+ £6 p&p)

### MINI TOWER CASE

AS DE-LUXE case but desk-top tower style.

£72.50 (+ £6 p&p)

## DISPLAY ADAPTORS

### UNIVERSAL VGA

This board auto-switches between 8 and 16 bit, drives mono, EGA and VGA monitors, (in native mode) and supports all standard VGA modes. Easy upgrade to extended VGA to give 1024 by 768.

£137.00 (+ £2 p&p)

### DUAL CGA/HERC

Auto-switch, plus port for printer.

£38.00 (+ £2 p&p)

102 keyboard £46 + £5

## I/O ADAPTORS

### RS232 short card

£16.10 (+ £2 p&p)

### AT SERIAL/GAME/

### PARALLEL CARD

Sockets for serial 2

£11.50 (+ £2 p&p)

### FLOPPY

### CONTROLLER

for XT or AT, 360, 720, 1.2, 1.44. Two drives 3.5" or 5.25".

£24 (£2 p&p)

## PC-DIY BOOK

■ you are not sure how to go about building your own PC, this book is for you. 112 pages full of DIY tips for £7.95 including postage.

VAT is INCLUDED in all our prices. Why not telephone or write for our FREE catalogue?

# BLACKMORE ELECTRONICS LTD

4 THE PLOCKS  
BLANDFORD FORUM  
DORSET DT11 7AA

Telephone: (0258) 451347

Fax: (0258) 456046

VISA ACCESS AND AMERICAN EXPRESS ACCEPTED BY POST, TELEPHONE OR FAX



## AMIGANUTS UNITED

RAYS PD LIBRARY IS NOW INTO ITS THIRD YEAR AND OFFERS THE LOWEST COPYING FEES IN THE U.K.  
 \* STOP PAYING OVER THE ODDS FOR YOUR \*  
 \* PUBLIC DOMAIN SOFTWARE \*  
 PRICES START AT ONLY FIFTY PENCE SELECTED FREEBIES WITH EVERY TEN PROGS ORDERED

NO MEMBERSHIP OR OTHER HIDDEN FEES

A SPECIAL INTRODUCTORY OFFER TO THE FASCINATING WORLD OF PD

DISK 230 CONTAINING 44 GREAT SELECTABLE TUNES  
 DISK 260 THE EXCELLENT SCROLLING SPACE GAME CALLED BLIZZARD  
 DISK 349 THE VERY FUNNY PUGGS ■ SPACE ANIMATION  
 DISK 401 PSEUDO-OPS LATEST AND BEST VIRUS KILLER/BRANFILE  
 DISK 443 SIX EXCELLENT DEMOS INCLUDING THE CAPT'S LOG/LASER DEMO  
 DISK 453 THREE NICE GAMES ■ ANDERS BJERGEN AND A GREAT FILE WINDOW UTILITY  
 DISK 454 STARFLEET 1 A NICE VERTICAL SCROLL SPACE GAME BY DOMINIC BEADIE  
 DISK 734 ONE OF THE LATEST TBAG DISKS OF THE MONTH FROM TAMPA BAY 1 S.A

ONLY £1.85 EACH INCLUDING THE DISK AND RETURN POST/PACKING

IF YOU DON'T HAVE A COPY OF THE 1990 LIBRARY DISK LISTING HUNDREDS OF PD PROGS. (INCLUDES THREE NICE GAMES) SEND £1.85 AND ASK FOR THE 1990 LIBRARY DISK NOW! UPDATES TO THE LIBRARY DISK ARE AVAILABLE AT REGULAR INTERVALS

Orders/Postal orders payable to: Ray Burt-Frost,  
 110, DALLVALE RD, HOLLYBROOK,  
 SOUTHAMPTON SO1 6QX

## COMPUTER REPAIRS

Fixed Super Low Prices/

Inclusive of parts, labour and VAT



FIRST AID  
 FOR  
 TECHNOLOGY

1 WEEK TURNROUND

## \* AMSTRAD / SINCLAIR AUTHORISED \*

SPECTRUM 48K	£14	C64	£22
SPECTRUM 128	£18	VIC 20, C+4	£22
SPECTRUM +2	£27	1541 DISK DRIVE	£36
C128	£29	C2N TDECK	£19
C16	£18	C64 PSU for sale	£27
Amiga	POA	Atari ST	POA

Please enclose payment with item - 3 month warranty on repair.

Please enclose advert with repair

W.T.S. ELECTRONICS LTD

(NCE 08 03 90)

Studio Master House, Chaulend Lane, Luton, Beds. LU4 8EZ

Tel: 0582 491949

(4 lines)

Standard terms ■ business apply

• GAINSTAR REPAIRS • GAINSTAR REPAIRS • GAINSTAR REPAIRS •

## IMB PC &amp; COMPATIBLES

COMMODORE

SINCLAIR

ATARI

ACORN

GAINSTAR SOFTWARE LTD  
COMPUTER REPAIRS

Avon House  
 Albany Park Ind Est  
 Camberley  
 Surrey  
 GU15 2PI

Tel: 0276 - 20144

0276 - 20226

Fax: 0276 - 29690

Our fast, friendly and efficient service to the general public and to the trade undertakes to repair any hardware from the above brands - GUARANTEED!

We offer you HIGH quality at a low cost so give us a ring at the above telephone number.

• GAINSTAR REPAIRS • GAINSTAR REPAIRS • GAINSTAR REPAIRS •

## A.B Computer Supplies

Amiga A500 Bat Pack Inc. modulator, Batman

D Paint II, F18 and New Zealand Story.....£369

Amiga 2000 XT Pack Inc. 1084s col. monitor,

XT Bridgeboard and 20MB PC DOS Hard Disk....£1349

Commodore A501 Ram Expansion 512K .....£112

Commodore 1084s Colour Monitor.....£249

Cumana CAX354 on/off switch, daisychain .....£89

Branded Sony 3.5" DSDD per box of 10 .....£12

WE NOW STOCK SAM COUPE - POA

All Prices Include VAT and Delivery U.K.

Please send Cheque/P.O. to:

A.B. Computer Supplies, 103a Shellfield Road,  
 Marshside, Southport, Merseyside PR9 9UL.

Tel: 0704-213544.

## NEW! WORLDS FIRST POCKET PC

Atari Portfolio Pocket PC - inc. Spreadsheet Time Manager - Address & Phone Book - Text Processor - Calendar & Comms Software R.R.P £249.99 Our Price £219

520STFM Explorer Pack - Ranarama - ST Tutorial - Desktop ST Basic  
 Should be £299.99 Our Price £269

## Power Pack

CX40 Joystick - Afterburner - Blacklamp - Bombjack - Bombuzal - Double Dragon - Eliminator - Gauntlet 2 - Nebulus - Outrun - Overlander - Pac Mania - Predator - R-Type - Space Harrier - Star Glider - Star Goose - Star Ray - Super Hang-On - Super Huey - Xenon - First Basic - Music Maker - Organiser

Only £349

Have a peaceful winter.  
 Send your kids to Pluto for £349

## Super Pack

1024k Ram - ST Basic - CX40 Joystick - Arkanoïd II - Beyond The Ice Palace - Black Lamp - Buggy Boy - Chopper X - Eddie Edwards Super Ski - Ikari Warriors - Marble Madness - Quadralien - Ranarama - Return To Genesis - Road Wars - Seconds Out - Starquake - Summer Olympiad - Test Drive - Thrust - Thundercats - Wizball - Xenon - Zynaps - Organiser Productivity Software (Spreadsheet - Wordprocessor)

Our Price £449

Star LC24 - 24 pin Printer - Cut Sheet Feeder - Paper Park £320  
 Cumana 1 meg Disk Drive £95  
 Atari Corp Megalife - 30 meg ST Hard Disk Drive £439  
 Casio MT240 Full Feature Midi Keyboard and Adaptor £119

We supply all available software and hardware for all major computers. Send SAE for our full price list to Expedite Trading, Unit F, 41 Union Street, Kettering Northants NN16 8JR  
 All prices include delivery and VAT

## COMPUTER REPAIRS, SPARES, SALES

## SPARES

Sinclair +2 Action pack .....£140.00 Sinclair +3 Action pack .....£190.00  
 C64 Light Fantastic pack .....£150.00 Light Fantastic kit .....£40.00  
 A500 Batman pack .....£390.00 520 STFM Explorer pack .....£290.00  
 Cambridge Z88 .....£220.00 A501 for Amiga .....£110.00

## REPAIRS

Spectrum 48k .....£16.00 Microdrive .....£16.00  
 128k +2 +3 .....£22.00 QL .....£27.00  
 Interface 1 .....£18.00

Many accessories in stock phone for prices. All prices include postage

Many spares and leads stocked

Send 20p stamp for prices (state computer)

Send cheque or postal order and computer to:

ACE REPAIRS, Outways Farm, Pelynt, Looe,  
 Cornwall, PL13, 2NW  
 Tel: 0503 20282

## ATARI ST OWNERS

Why not complement the greatest home computer on the market by obtaining membership with the MIDLAND GAMES LIBRARY

The greatest, biggest and best Atari Club on the market.

## APPROX 2050 ST TITLES FOR HIRE

Games Business, Education and utilities

MIDLAND GAMES LIBRARY:

The company who over 5 years ago first conceived the idea of a software library

Often purchasing popular programs in multiples of five or six to give all our members a fair chance. Always adding approximately 40 new programs monthly. Many very satisfied members, many as far away as Iceland, Sweden, West Germany, Holland, Denmark and Eire

A fast efficient and friendly service operating a computerised custom built system ■ keep track of ■ your records, requests are attended to immediately, virtually assuring you 24 hour return service, regular newsletters and program updates plus other inter-club activities

SEND LARGE SAE TO

MIDLAND GAMES LIBRARY

Dept STE/11, 48 Redway, Bishops Cleeve, Cheltenham

Glos. Tel: 0242 674960 - 9.30am-4.30pm

All our programs are originals with full documentation

## SPECTRUM TAPE TO DRIVE

Transpack 1 - for all drive systems. Includes CUBs and other software and sample transfers. Not for the novice. £12.00. For the difficult programs information books 1, 2 or 3 - £6.00. Transfers per book with Transpack. £2.50 each. Send S.A.E. for lists.

## M/DRIVE OWNERS - MICROMATES

It pays for itself!...£11.99. Format (approx 104K), Clone, Sector Editor, Rename, Reconditions & Repairs, Multi-erase, Cat Copies tape to drive (not games) & Reverse, Drive to drive on Cartridge



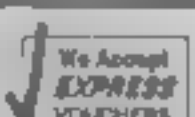
Spectrum Cold Compressor .....£4.50  
 M/Drive Cartridge (Min. 4) .....£1.75 each  
 +3 Discs (Min. 4) .....£2.30 each

## SPECTRUM TAPE TO TAPE

TUC - copies most tapes. Measures loading speed, copies exactly blocks even over 51K + much more. £8.50

## PLUS - 3 MATE

For Spectrum +3. Plus 3 mate has 5 disk programs inc. full Cat, Disk Repair/Verify, Unerase, Sector Editor, Multiple Erase + File Copier, Disk info, Boot Prog., etc. Includes Clone whole disk copier (inc. protected disks) On Disk £12.99



## AMSTRAD/SPECTRUM VERSION Z80 TOOL KIT 2

Inc. Single Step - helps you understand/Debug M/Code, Assembler, + programme to do the reverse - M/Code to Source. Disassembler, Hex to Dec, Tool Kit, Loader Mode, etc.  
 Spectrum .....£8.99 Amstrad CPC Version .....£9.99

Send S.A.E. for details. Post Free in U.K. - Add £1.00 Europe - £2.00 rest. State your system when ordering e.g. Spectrum +2 and Microdrive. Money back guarantee on software. Prop. L. Evans

LERM, Dept NCE 2, 11 Beaconsfield Close, Whitely Bay, Tyne and Wear, NE25 9UW,  
 Telephone: 091 253 3615, Send S.A.E. for details



## MAKE YOUR MICRO EARN

Yes making money with your micro becomes incidental when you know how. Your micro is, if only you knew it, a gold mine. The size and make is irrelevant. Make the initial effort **NOW** by starting your own

### HOME BASED BUSINESS

*This may be the most important move you will ever make!*

**REMEMBER:** You'll never get rich by digging someone else's "ditch". Anyone in the country including **YOU**, can become very rich in a relatively short period of time just by doing a few basic things! It's more rewarding than playing games. The benefits are many and varied. Full or part time. For **FREE** details send S.A.E. to:



## HOME BASED BUSINESS

31 PILTON PLACE (NCE 15)  
KING AND QUEEN STREET  
WALWORTH, LONDON SE17 1DR

## ALL COMPUTER HARDWARE AND SOFTWARE WANTED FOR CASH OR EXCHANGE

**NOTHING REFUSED!!**

**01 727 0424**

## MEMORY UPGRADES

*Component Resources Limited*

### ATTENTION!

#### ATARI 520 STE USERS

Your 520 STE comes with 4 RAM card slots, two already fitted providing 1/2 Meg of memory. We can now offer you additional RAM cards, together with simple to follow instructions to increase memory up to 4 MEGS

2 x (256K) RAM CARDS FOR 1 MEG	£60.00
3 x (1 MEG) RAM CARD FOR 2 MEG	£175.00
4 x (1 MEG) RAM CARD FOR 4 MEG	£255.00

Send cheque/money order to:  
**Component Resources Ltd.,**  
37A High Street, Offord D'Arcy,  
HUNTINGDON, Cambs. PE18 9RF

CO-PROCESSORS	Price £
8087-8MHz	82 00
8087-10MHz	105 00
80287-8MHz	140 00
80287-10MHz	155 00
80387-16MHz	240 00
80387-20MHz	280 00
80387-25MHz	349 00

**SPECIAL**  
Upgrade your AMSTRAD 1512  
to 640K £23.50  
Including Instructions

ALL PRICES EXCLUDE VAT  
ADD £1.50 Pack & Post  
Allow 10 days for Delivery  
Tel. 0480 812220 Fax: 0480 810020

## DIGITAL DISCS

(formerly Direct Disks)

**3 1/2 DISKS 135 TPI DSDD WITH LABELS**  
**LIFE TIME GUARANTEE**  
**100% ERROR FREE**

CHEQUES/PO  
MADE  
PAYABLE TO  
DIGITAL DISCS

**£6.75**

FOR 10  
INC VAT & FREE  
DELIVERY IN UK

DIGITAL DISCS  
60 BURNSIDE DR  
BRAMCOTE  
HILLS  
BEESTON  
NOTTINGHAM  
NG9 3EE



TEL: 01-960 5578  
FAX: 01-318 1439

481 Harrow Road London  
W10 4RG

## MONITORS OFFER

**NEC CGA Colour**

**Only £99**

Amiga Batpack	£329
Atari ST Exp Pack	£249
Schneider Euro PC with 12" colour monitor	£499
And many more!!	Ex VAT

## EXPRESS COMPUTERS

SPECIALISTS IN SECOND USER IBM  
COMPATIBLE COMPUTERS & EQUIPMENT

- PRINTERS ● PERIPHERALS ●
- HARD DISKS ● COMPONENTS ●
- NETWORK INSTALLATIONS ●
- MAINTENANCE ●

CALL NOW FOR YOUR BEST POSSIBLE DEAL

**(0604) 35519**

COMPUTERS & HARDWARE ALSO  
PURCHASED FOR CASH

## THE ULTIMATE SERVICE.

**JUST RING 0898 36 24 36.**

**DARE YOU LISTEN?**

(25p/38p per min)

## DISK DRIVES

all double sided double density  
all brand new and guaranteed

Commodore 3.5" for 128 and many others	£59
Epson 5.25" ref SD540 with data	£55
NEC 3.5" extra compact with data	£59

Also your chance for **bargain of year** Sharp 4 colour plain paper printer/plotter adaptable to most PC's £16. Send remittance or phone 0273 430380 for Access or Visa

**M & B Electrical, 12 Boundary Road, Hove, BN3 4EH**

NOVA brings you.....A new concept in Amiga PD - VALUE



**FAST, PROFESSIONAL  
AND FRIENDLY  
AMIGA PD SERVICE**

HIGH QUALITY PUBLIC DOMAIN DISKS

**£2.00 OR LESS**

Two Disk Catalogue £2.00

We'll get any PD disk for you - AT NO EXTRA CHARGE  
NO EXTRA FEES - Write for overseas postage  
FREE MONTHLY PRIZE DRAW

ALL Libraries available (Fish, TBAG, AGATron etc.)  
Latest demos, animations etc.

Discount Hardware/Software/Disk etc.  
I.e. PHOTON PAINT 2 £49.99 SONIX £39.99

Prices start at \$0000

Cheques/POs Payable to NOVA

NOVA (AF2), 30 Parsons St, Banbury, Oxon OX16 8LY ☎ (0295) 262029

## YOU SAW THIS SPACE!

**So Do 24,637 other prospective  
buyers every week!**

To find out how this space could work for you,  
**CALL SIMON MOSS ON (0225) 442244**

## COMPUTER REPAIRS

Specialists in Home and Business Computers, all makes repaired.  
ATARI, AMSTRAD, COMMODORE, SPECTRUM, SINCLAIR etc

Atari Approved Service Centre

We also repair Printers, Monitors, Disk Drives etc.  
FREE estimates, all work fully guaranteed

A.M.C., UNIT 4, WESTON ROAD INDUSTRIAL ESTATE,  
STRATFORD-UPON-AVON, WARCS, CV37 0AH  
**0789 292269**



# Evesham Micros

All prices include VAT and Delivery

## ATARI

All our ST prices include: mouse etc. plus 5 disks of software including First Word word processor, utilities, Neochrome graphics utility, game and demos.

### 520 STE POWER PACK

Amazing value, special ST package from Atari! Includes the very latest 520STE with 1Mb drive, joystick, mouse, user guide, 5 disks of public domain software, plus an incredible selection of chart-topping software with a total RRP of over £500! Software included is:

R-Type	Pacmania	Out Run	Nebula
Afterburner	Starblazer	Bombuzal	Starblazer
Double Dragon	Super Huey	Xenon	First Music
Super Hangon	Eliminator	Gauntlet II	First Basic
Space Harrier	Predator	Black Lamp	Organiser
Overlander	Bombjack	Staray	

All  
for **£339.00**  
only inc VAT & delivery

520 STE Explorer Pack latest version with 1Mb drive, 512K RAM	£259.00
1040 STE includes 1Mb drive, 1Mb RAM, with built-in TV modulator	£399.00
Mega ST1 with monochrome monitor	£599.00
Mega ST2 with monochrome monitor	£849.00
Mega ST4 with monochrome monitor	£1099.00
SM124 monochrome monitor	£119.00
SC1224 colour monitor	£279.00
Philips CM8833 14" colour monitor (stereo sound) c/w ST cable	£249.00
Vidi-ST 16-tone video frame grabber inc. digitising software	£95.00
Vortex 40Mb HDplus Hard Disk	£499.00
5.25" External Drive 360/720K 40/80 track switchable	£99.00

### Amstrad PC1512/1640/2086

We offer a wide choice of Amstrad PCs with many upgrade options. For the hard disk option, check our 'Evesham Upgraded Models'. Only the best will do - so we normally upgrade by means of a Western Digital Filecard, which includes XTree & SpeedRead software; however on single drive 1512/1640 models we can offer internal installations at the same price (leaving more expansion room but no upgrade opportunity for a 2nd floppy drive). Prices in lighter type exclude VAT.

Free with 1512 models... Ability and 4 US Gold Games

	SD	DD	AMS H.D.	SD 21MEG	DD 21MEG	SD 32MEG	DD 32MEG
EVESHAM UPGRADED MODELS							
MONO 1512	384.35 442.00	477.39 549.00	N/A N/A	580.00 673.04	673.04 774.00	592.17 681.00	685.22 788.00
COLOUR 1512	494.78 569.00	555.85 639.00	N/A N/A	690.43 794.00	761.30 864.00	702.61 808.00	783.48 876.00
MONO 1640	474.78 546.00	555.85 639.00	738.26 849.00	670.43 771.00	751.30 854.00	682.61 785.00	763.48 876.00
CGA (1000) 1640	581.74 668.00	651.30 749.00	825.22 948.00	777.39 894.00	848.90 974.00	789.57 908.00	859.13 988.00
EGA (ECB) 1640	677.39 779.00	738.26 849.00	938.26 1079.00	873.04 1004.00	933.91 1074.00	865.22 1018.00	948.09 1088.00
2086 MONO	564.35 649.00	633.91 729.00	813.04 935.00	780.00 874.00	829.57 954.00	772.17 888.00	841.74 966.00
2086 CD	658.52 755.00	726.09 835.00	903.48 1039.00	852.17 980.00	921.74 1060.00	864.35 994.00	933.91 1074.00
2086 12" HRCD	748.96 859.00	813.04 935.00	995.65 1145.00	942.81 1084.00	1008.70 1160.00	954.78 1098.00	1020.87 1174.00
2086 14" HRCD	833.91 959.00	903.48 1039.00	1086.09 1248.00	1029.57 1184.00	1099.13 1264.00	1033.04 1198.00	1111.30 1278.00

12 MONTHS ON-SITE MAINTENANCE PROVIDED WITH ALL MODELS OF PC1512, 1640 AND 2086 FREE OF CHARGE!

### upgrades / accessories

1512 memory upgrade to 640K	£39.95	Enhancer 101 replacement keyboard	£74.95
Maths Co-processor 8087-2	£129.00	3.5" drive (720K) for SD models	£79.95
NEC V30 (8086 replacement)	£24.95	PC2000 series compatible	
Archive XL 40Mb Ext. tape streamer	£379.00	5.25" (360K) external drive	£84.95
Amstrad Modem Card V21/23	£99.00	Genius GM6000 Mouse package	£34.95
Communicate Fax Card SR	£199.00	Konix PC Joystick & Controller Card	£28.95

### Amstrad PPCs

Low prices on all portable PCs - especially twin drive models  
prices in brackets are excluding VAT

PPC512S	(£373.04) £429.00	PPC640S	(£477.39) £549.00
PPC512D	(£433.91) £499.00	PPC640D	(£546.96) £629.00

## AMIGA 500 LOW COST RAM UPGRADE

ONLY £65.00 inc VAT & delivery

### 512K RAM/CLOCK EXPANSION FEATURES:

- ☆ Direct replacement for the A501 expansion
- ☆ Convenient On / Off Memory Switch
- ☆ Auto-recharging battery backed Real-time Clock
- ☆ Compact unit size : Ultra-neat design
- ☆ Uses only 4 D-RAMs for High Reliability
- ☆ Low power consumption

RAM expansion without clock, only ... £57.00

### AMIGA ACCESSORIES

External 5.25" 40/80 track switchable floppy drive	£114.95
Midi Interface by Omega Projects, including 30" serial connector	£29.95
Contriver Hi-Res replacement mouse, with mouse mat and pocket	£22.95
MiniGEN Genlock Adapter	£95.00
Vortex 'System 2000' 40Mb hard disk, with interface & software	£499.00
Philips CM8833 colour monitor (stereo sound) c/w cable	£249.00
Amiga 500 dust cover	£4.95

### Amiga & ST 3.5" Drives

- ★ Very Quiet
- ★ Slimline Styling
- ★ Fully Compatible
- ★ Top quality Teac/Citizen drive mechanism
- ★ On/Off switch for Amiga
- ★ External plug-in PSU for ST
- ★ Throughport for Amiga
- ★ 1Mb unformatted capacity

Fully compatible, high quality 3.5" external drives for the ST and Amiga

Amiga version only £69.95

Atari ST version only £74.95

Prices include VAT & delivery

### Western Digital Filecards

Upgrading your PC to hard disk? Look no further, we offer the best prices on top quality hardcards. Thorough documentation supplied, low power consumption, with free XTree file management software and Speedread. For Amstrad PC users we supply hardcards tested and formatted, with our simple software installation procedure. The best packages available!

21MB...£225.00 32MB...£239.00 41MB...£289.00

3.5" disks  
fully guaranteed double sided media

5.25" disks  
fully guaranteed double sided media

### PRINTERS

All prices include VAT, delivery and cable

star

We recommend Star printers since they do not require special maintenance contracts for only £5.75 extra.

Star LC24-10 feature-packed multifont 24 pin printer, amazing low price	£239.00
Star LC10 best-selling 144/36cps printer, 4 NLO fonts, inc.2 extra ribbons free	£169.00
Star LC10 7-colour version of above printer, inc.2 extra black ribbons	£215.00
Star LC15 wide carriage version of LC10	£329.00
Star LC24-15 wide carriage version of LC24-10	£409.00
Star FR-10 new Professional 9 pin 300/76 cps, 31K buffer, 18 NLO fonts, EE-PROM configuration memory and 12 months on-site maintenance	£399.00
Star FR-15 9 pin as FR10, wide carriage version	£499.00
Star XB24-10 Professional 24 pin: 27K buffer, 4 SLQ & 25 LQ fonts with EE-PROM configuration memory and 12 months on-site maintenance	£499.00
Star XB24-15 wide carriage version of XB24-10, with 41K buffer	£649.00
NEC P2+ budget 24pin	£299.00
Olivetti DM100S Super 9 pin 200/30 cps, inc.1 year on-site maintenance	£129.95
Amstrad DMP3160/3250DI good value 10" 9pin	£169.00
Panasonic KXP1081 reliable budget 10" printer 120/24 cps	£159.00
Panasonic KXP1180 super new 9pin with over 3400 typestyles, 11" carriage	£179.00
Panasonic KXP1124 good quality 11" multifont 24pin printer	£289.00
Epson LX800 popular 10" 180/25 cps	£159.00



# olivetti

Two names  
you can trust

## at Evesham Micros

### SPECIAL PURCHASES

## OLIVETTI DM100S



**Top value, high performing 9-pin dot matrix printer**

- 200cps draft, 30cps NLQ print speed
- Pica, Elite and Condensed printing
- Standard Centronics Parallel interface
- Friction and Tractor feed
- Optional auto cut sheet feeder available

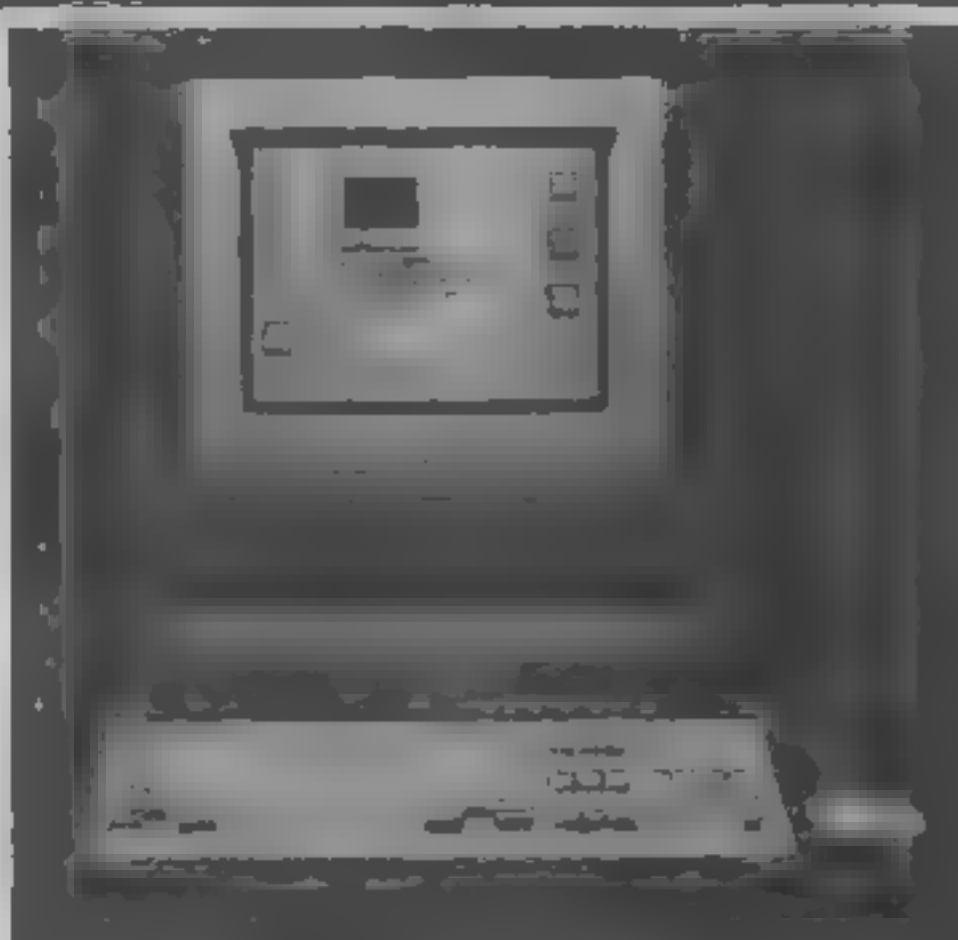
**UNBELIEVABLE  
PRICE !**

**£129.95**

Cut sheet feeder also  
available for only £79.95  
Prices include VAT, delivery and  
12 months on-site maintenance!

## PCS series

**TOP QUALITY - HIGH PERFORMANCE!**  
All prices shown include VAT, delivery  
and 12 months on-site maintenance



### PCS 86

	12" MONO	14" COLOUR
SINGLE FD	£688.85	£918.85
TWIN FD	£803.85	£1033.85
20MB HD	£1033.85	£1263.85

- ◆ NEC-V30 microprocessor 10MHz clock speed, 0 wait states
- ◆ 640K RAM standard, upgradeable to 2.5Mb on motherboard
- ◆ Single or Double 3.5" floppy drives with 720K formatted capacity
- ◆ Optional 20Mb Hard Drive version also available, with 27ms access time
- ◆ 3 Full size 8-bit XT-compatible expansion slots
- ◆ Socket for 8087 maths co-processor
- ◆ 1 x RS232 Serial interface and 1 x Centronics Parallel interface
- ◆ VGA compatible (OVC) display controller fitted standard
- ◆ VGA monitor supplied: 14" Colour or 12" Flat-screen Mono. (dot pitch 0.39mm)
- ◆ Mini-din PS/2 Interface sockets for keyboard and mouse
- ◆ 101/102 key AT-layout PS/2 compatible keyboard
- ◆ Optional 'Genius GM-U2' hi-res mouse available for only £49.95 inc.VAT
- ◆ Optional external 5.25" drive also available - phone to check availability.
- ◆ Plus: 'Logotron 8-in-1 Professional' integrated package, free with all models.

### PCS 286

	12" MONO	14" COLOUR
TWIN FD	£1148.85	£1378.85
20MB HD	£1263.85	£1493.85
40MB HD	£1378.85	£1608.85

**FREE WITH ANY PCS 286 - OLIVETTI DM100S PRINTER  
AND 'LOGOTRON EIGHT-IN-ONE PROFESSIONAL' !**

- ◆ Intel 80286 microprocessor 12MHz clock speed, 1 wait states
- ◆ 1Mb RAM standard, upgradeable to 4Mb on motherboard
- ◆ Single or Twin 3.5" floppy drives with 1.44Mb formatted capacity
- ◆ Optional Hard Drive versions: 20Mb (27ms access time) or 40Mb (28ms)
- ◆ 3 Full size expansion slots; 1 x 8bit and 2 x 16bit XT/AT-compatible
- ◆ Socket for 80287 maths co-processor
- ◆ 1 x RS232 Serial interface and 1 x Centronics Parallel interface
- ◆ VGA monitor supplied: 14" Colour or 12" Flat-screen Mono. (dot pitch 0.39mm)
- ◆ Optional 'Genius GM-U2' hi-res mouse available for only £49.95 inc.VAT
- ◆ On-Board RAM upgrades now available - please phone for details
- ◆ We can substitute another printer of your choice with £129.95 allowance.



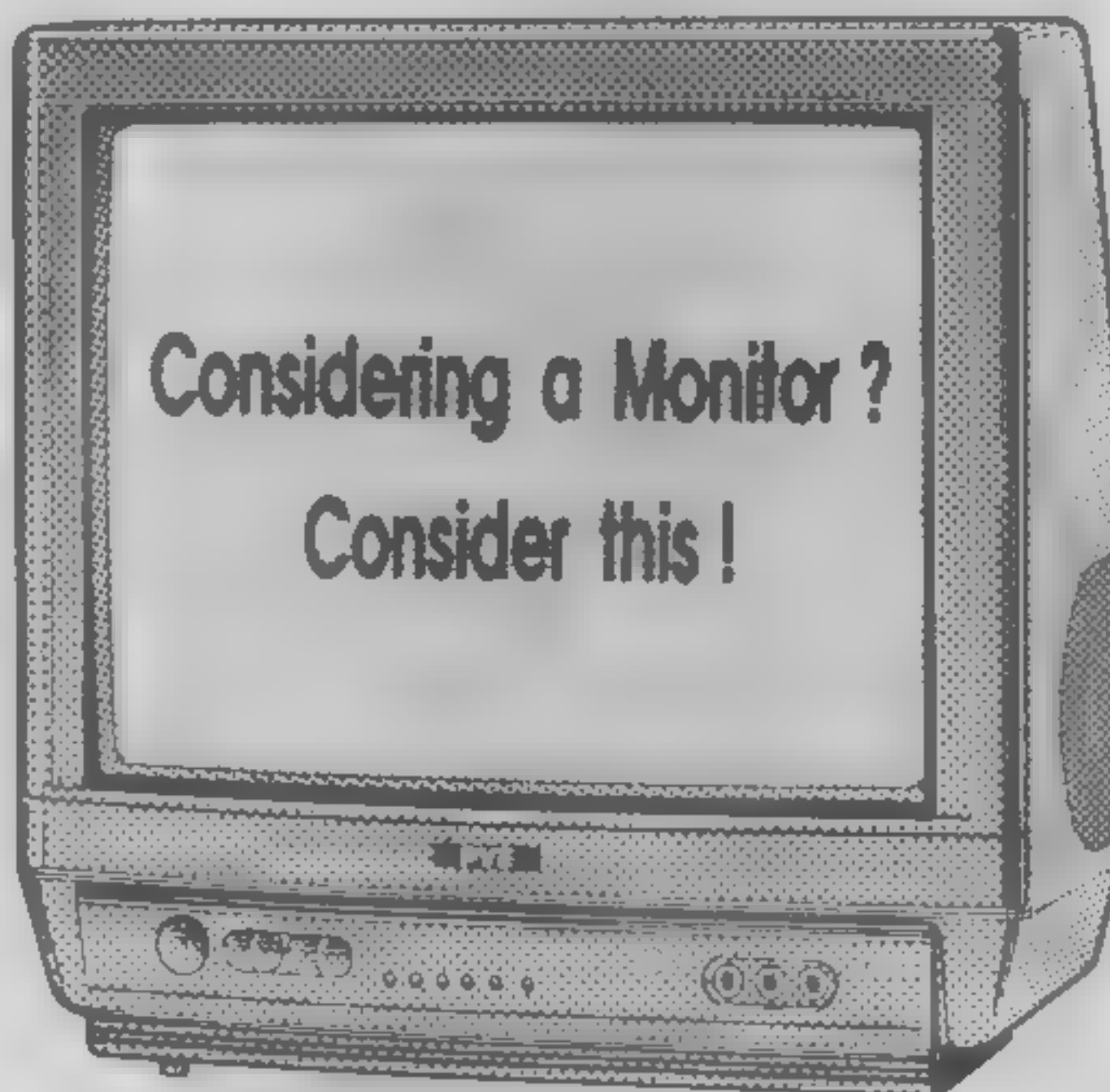
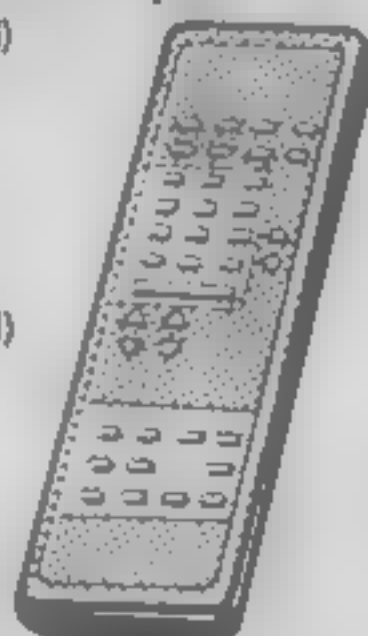
## PYE 15" FST TV/Monitor (MODEL 2325)

With its dedicated monitor input, this model combines the advantages of a high quality medium resolution monitor with the convenience of remote control Teletext TV - at an excellent low price !

- ✓ Suits ST or Amiga (cable supplied)
- ✓ Teletext facilities
- ✓ Full infra-red remote control
- ✓ SCART Input/Output Connector
- ✓ Audio/Composite Video inputs
- ✓ 40 TV tuner presets
- ✓ Headphone private listening jack
- ✓ External aerial input (loop supplied)

**£249.00**

includes VAT, delivery  
and computer  
connection lead



**Considering a Monitor ?  
Consider this !**

## ATARI ABC-286

**Prices include Olivetti DM100S  
printer and Logotron '8-in-1'  
Integrated software package !**

- ☆ 80286 Processor with 8MHz clock speed
- ☆ 640K RAM standard, expandable to 1Mb
- ☆ 3 AT / XT compatible Expansion slots
- ☆ 1 RS232 Serial and 1 Parallel ports
- ☆ Disk controller supports 2 floppy & 2 hard drives
- ☆ One 3.5" (720K) floppy drive and a 30Mb hard disk drive fitted as standard
- ☆ Socket for 80287-8 Maths Co-Processor
- ☆ Video graphics adapter supports EGA, CGA, MDA and Hercules, with digital video port
- ☆ 102-key DIN spec. AT-Protocol keyboard
- ☆ Supplied with MS-DOS 3.3 and GW-BASIC

**ABC-286 S.D./30Mb  
with Mono Monitor ..... £ 999.00**

**ABC-286 S.D./30Mb  
with EGA Monitor ..... £1149.00**

.....  
Optional 5.25" 1.2Mb Internally  
fitted floppy drive available ..... £119.00  
Prices include VAT/Delivery

## OLIVETTI PG-306

High performance HP-Laserjet compatible laserprinter

- 75 to 300 dpi graphics resolution
- 6 pages/min. (A4/B5/letter/legal)
- 8 resident fonts including Courier
- 512K RAM (upgradeable)
- Standard Centronics interface
- Expansion possibilities include PostScript board & serial interface
- Toner cartridge & drum supplied
- 12 months on-site maintenance

**£1144.25**

INC.VAT, DELIVERY  
AND 12 MONTHS  
ON-SITE  
MAINTENANCE

## How to order from Evesham Micros



**MAIL ORDER SALES :**  
☎ 0386-765500



**Technical Support (Mon-Fri):**  
0386-40303

All prices include VAT and delivery. Express Courier delivery £5.00 extra.

✉ Send cheque, Postal Order  
or ACCESSVISA card details

Govt., educ. & PLC orders welcome  
Same day despatch whenever possible  
All products covered by 1 year guarantee  
All goods subject to availability, E.&O.E.

Retail 1762 Pershore Road, Cotteridge, Birmingham B30 3BH Tel: 021 458 4564  
outlets 63 Bridge Street, Evesham, Worcs WR11 4SF Tel: 0386 765180  
at: 5 Gimson Road, Cambridge CB1 2HA Tel: 0223 323898

**Evesham Micros Ltd**  
UNIT 9 ST RICHARDS RD  
EVESHAM  
WORCS WR11 6XJ  
☎ 0386-765500  
fax 0386-765354



**ORIC** Atmos 48K complete with manual, 3 books, various games inc Chess, Wordprocessor (Wordsworth), User group info included. Any offers to (0787) 227898 (Suffolk).

**ACORN** comp. and software £160 o.n.o. Tel: (0908) 510 284.

**C64C** cassette, 1 joystick, mouse & software over £350. Software inc. Batman Turbo, Outrun & Powerdrift worth altogether over £550 sell for £200 o.n.o. Buyer collects. Tel: (0923) 778750.

**ACORN** colour monitor for sale, brand new, still boxed with leads. A bargain at £150, please phone (0634) 366982 for details, might deliver.

**SPECTRUM** +2 Cheetah 125+, joystick £60 o.n.o. Over 100 games including Chase HQ, Microprose Soccer, £100 o.n.o. Combined Price £150 o.n.o. Tel: (0684) 561 222.

**PAGE** Linnet modem, V21/V23 with cable for ST, Amiga or PC £90. Write: Jerome Pimmel, Springfield Lodge, Kings Road, St. Peter Port, Guernsey, CI.

**FOR** sale Commodore 64, 2 Tape decks, Power Pack £300 worth of software, good condition, will sell for £160 o.n.o. Tel: Birmingham 747 8533.

**COMMODORE** 64, disk drive with Phantom 300+ disks, approx 2500 progs. Expert cartridge, books & extras, £300 o.n.o. Bell, 1 Sutton Way, South Shields, Tyne & Wear, ME34 7QG. Tel: (091) 4544681.

**AMSTRAD** Action magazine for sale, nos 4,8,9,10,12-15, good condition £10. Price includes original cover tapes and postage. Please write to: Andy, 35 Roseberry Avenue, Worthing, BN12 4EX.

**ORCHID** Turbo EGA card. Adds a 286 and

EGA graphics to your old 8088 PC/XT, only £80 brand new! Write to: P. Roberts, 5 Arlington Close, Yeovil, Somerset, BA21 3TB.

**AMSTRAD** PC software, original Supercalc 3.21 Spreadsheet as new, full instructions and Answercalc, 5 1/4 and 3.5 format disks, only £75, Bristol area (0454) 312794.

**GEM** 1st Word Plus package package, includes GEM/3 desktop, GEMpaint, runs on PC/XT, PC/AT, PS/2 or 100% - compatibles, excellent condition, genuine bargain £69 o.n.o. Tel: (0344) 421252.

**DISKS** 3.5-inch Sony unbranded 135tpi still boxed DS/DD qty 100 unwanted gift. Must go £45 the lot. Ring John between 6.00pm - 10.00pm on (0274) 727415.

**AMIGA** software £7.00 each Batman, Interceptor, New Zealand Story, Powerdrift, Super HangOn, Afterburner, Operation Wolf, The Dual, Silkworm & Capone. Tel: Bob 01-949 0240 answerphone.

**FOUR** Phillips P5010 Satellite workstations are either standalone or can be connected to Phillips P5020 offers Nick Cleveley (0858) 32374.

**PHILLIPS** P5020 Twin 5 1/4-inch drive dedicated wordprocessor with Daisy Wheel Printer and all software can also be linked to satellites. Offers Cleveley (0858) 32374.

**PHILLIPS** P5002 Twin 8.5-inch drive dedicated wordprocessor with Qume Daisy Wheel Printer and software. Offers Nick Cleveley (0858) 32374.

**DRAGON** 32 with mains adaptor, 2 joysticks, leads, manuals, including games: Lunar Patrol, Dragon Chess, Shenanigans etc. All v.g.c. Offers (0703) 615109.

**ATARI** Mini Office II £10.00 Atari Writer Plus

£10.00 both require disk drive. Tel: (061) 223 5974 will post.

**SPECTRUM** 128K +2A, about £150 worth of games, Cheetah + Joystick, very good condition. £1 for £200 Ring (0793) 727637 after 5pm.

**AMSTRAD** CPC464 computer, some games, no modulator/monitor, perfect condition, £110 o.n.o. Amiga Batpack software including Batman, DPaint II etc. £60 Atari ST Summerpack software, £60 o.n.o. Tel: (evenings) Middx. 574 5675.

**VIDEO** Thing system for Commodore 64 also Business software all on disk and originals - offers 01-800 9269.

**BBC B+** Shadow RAM, Sideways RAM, 20 or more cassette games, green monitor, leads, manual (user guide), mags, £150. Tel: Mark on (0742) 482820.

**AMIGA** A500, A501 upgrade, 1Mb external drive, plus over £500 of software worth £1000+ new, sell for £700 o.n.o. Phone Chris 01-561 4377 (after 5pm).

**ST** games £5 Joan/Arc, Voyager, Hacker I & II, Leg of Sword, Galdregon's Domain, Star Wars, Space Quest I, Powerdrive, also Falcon £12, Rocket Ranger, War Mid Earth £5 both. Phone anytime (061) 794 5801.

**AMSTRAD** PCW8512 complete package including printer etc. extremely good condition as new, boxed £350 will haggle - Wigan (0942) 45648.

**AMIGA** datadisk for Superbase Personal. Complete British Amiga magazine index. S.A.E. for details or £10 for disk to: Twiddle, 52 Littleham Close, Bransholme, Hull HU7 4RR.

**AMIGA** games: Kick Off, It Came From The Desert, Flight Sim. 2, New Zealand Story, Shuffle Puck Cafe, Populous, Bubble Bob-

ble, Shogun, Sim. City, £9 each. Tel: 01-789 3978.

**SPECTRUM** +3 Joystick games and multi-face 3 all for just £150 o.n.o. Phone 01-391 4125.

**C64** Programmers Reference Guide £6.00, Neos Mouse and Cheese, no instructions £13.00. Turbo 3D cartridge £10.00. Michael Vainola, 5 Woodside Cottages, Highwood, Chelmsford, Essex, CM1 3RD.

**COMMODORE** MPS1230 printer never been used, unwanted gift £130 o.n.o. Phone Castleford (0977) 519419.

**BBC B+** plus Cumana dual drives, Cub monitor, Epson printer £550 o.n.o. Phone Steve or Allen on (0204) 395891.

**SPECTRUM** games 70 including Robocop, Dragon Ninja, We Are The Champions Plus 26 magazines and a FREE interface £30, will separate Canvey Island 0268 691658.

## ● GOODS WANTED

**'SAGA'** Keyboard wanted for Spectrum either Saga - "2+3-Elite"/"2001"/"Commander", Good price paid, any details/offers, please phone anytime (Cash waiting) phone 0743 249094.

**WANTED** Technical/Repair Manuals or info for NEC FD1036A Disk Drive. Contact Mr A. Telford, 14 Beaufort West, Bath, BA1 6QB.

**WANTED** Repair Manuals for Atari ST, Amiga. Contact Mr A. Telford, 14 Beaufort West, Bath, BA1 6QB.

**WANTED** for Epson LQ800 Printer: Tractor Unit, Paper Guide and Print Head. Contact Mr A. Telford, 14 Beaufort West, Bath BA1 6QB.



**ONCE BYTTEN**

59 Swanley Road  
Welling

Kent DA16 1LL

Tel: 01-304 2631 Fax: 01-304 7214

"THE  
TRADE-IN  
POST"

## WE SELL SERIOUS MACHINES AT SILLY PRICES

### EPSON PC - PRICES INCLUDE MONITOR & VAT

	MONO	COLOUR VGA
286- AX2E 12 Mhz IFDD	£1450	£1689
AX2E 12 Mhz 40mb HDD	£1659	£1889
386- AX3S 16Mhz 40Mb HDD	£2099	£2340
AX3 20Mhz 40Mb HDD	£2735	£2999
AX3 25Mhz 100Mb HDD	£3849	£3999

### AMSTRAD - PRICES INCLUDE ON-SITE WARRANTY & VAT

	MONO	COLOUR	HI-RES COLOUR 14"
286- PC2286 40Mb HDD	£1245	£1399	£1555
386- PC2386 65Mb HDD	£2079	£2235	£2389

### COMMODORE - PC STARTER PACKS AS SEEN ON TV! PRICES INCLUDE ON-SITE WARRANTY & VAT

	MONO	COLOUR	HI-RES COLOUR
PC10 XT IFDD	£599	£755	£885 (VGA)
PC10 XT 2FDD	£649	£799	£935 (VGA)
PC20 XT 20Mb HDD	£829	£989	£1149 (VGA)
PC30 AT 20Mb HDD	£1199	£N/A	£1399 (EGA)

(ASK FOR VGA MONO PRICING & PC30 VGA OPTION PRICING)

### HEWLETT-PACKARD - INC ON-SITE WARRANTY & VAT NEW! THE H-P LASERJET III LASER PRINTER

1Mb RAM 8ppm, 14Internal Bitmapped Fonts 8 Internal Scalable Fonts  
16,000 cpm usage (LJII 12,000) OUR PRICE ONLY £1699 INC VAT

ALL H-P PRODUCTS AVAILABLE AT COMPETITIVE PRICES  
DESKJETS, PAINTJETS, LASERJETS ETC. PLEASE PHONE EDUCATIONAL  
DISCOUNTS AVAILABLE ON ALL H-P PRODUCTS.

### SECONDHAND

Amstrad PC2086 30MBHDD 14" HRCD - Boxed	£899 Inc VAT
Commodore A2000 2FDD - Boxed	£650 Inc VAT
Kaypro Laptop 256K MS-DOS IFDD & Case	£199 Inc VAT
Citizen HQP-40 24 Pin + Colour Kit	£225 Inc VAT

IMPORTANT WAFFLE - CARRIAGE CHARGES Computers & Monitors £10 together £15 Printers £10 Overseas  
and European orders are welcome and receive our careful attention. Please ask for a quote for  
VAT free export orders.

OFFICE HOURS are 10am - 8pm Mon-Sat - Callers are VERY Welcome BUT please phone first.

Reach the top  
with

LCL

## Self Tuition Courses

World leaders - Hons graduate/teacher authors - At all major  
shows - £5 off total for 2, £10 off for 3

### MICRO MATHS

Complete course taking beginners to GCSE in 24  
programs (lessons) on 34 topics + 2 books. £24 (ST,  
AMIGA, PC, PCW, CPC, BBC)

### MICRO FRENCH

Complete course taking beginners to GCSE with real  
speech & graphics adventure game. 24 programs + 2  
books £24 (ST, AMIGA, PC, BBC)

### MICRO ENGLISH

Complete course taking age 8 years to GCSE in English  
Language, or EFL, with real speech Spelling,  
punctuation etc. 24 programmes + 2 books £24  
(AMIGA, CPC, PCW, BBC)

### PRIMARY MATHS COURSE

Complete course taking age 3 years to secondary school  
entrance, using moving colour pictures. National  
Curriculum Levels 1-4 24 programs + 2 books £24 (ST,  
PC, CPC, BBC)

### MEGA MATHS

A-level step-by-step course of 24 programs Full screen  
graphics for calculus £24 (ST PC, CPC, BBC)

Send coupon and cheques/PO's or phone orders or requests for free colour poster/catalogue to  
LCL (DEPT NCE) THAMES HOUSE, 73 BLANDY ROAD, HENLEY-ON-THAMES, OXON RG9 1QB



or ring 0491 579345 (24 hrs)

Name .....

Address .....

Title .....

Computer .....



**ATARI 800XL** Owner with 810 Disk Drive, requires Manual on both "Only works when in good mood". Phone after 6.30 pm 0268 557157. Ask for Peter.

**WANTED** any damaged, broken computers that are not working or have bits missing will pay up to £25. Phone 0924 381574

**MSX2** wanted Disk Drive 720K double side 3.5-inch internal. Willing to pay up to £60. Phone Claudio on 0723 354273 after 7pm.

**WANTED** Game Command Modules for Texas Computer Model T1-99. Contact 0394 671172.

**AMIGA FORMAT** magazines issues 1, 2, 3, and 4 wanted. Reasonable price offered. Will buy separately. Contact Philip 08206 22398 after 4.30pm weekdays

**TANDY** 1000HX memory plus Expansion Adaptor (CAT 25-1062). Any condition considered. Contact John 0695 577317.

**WANTED** Book called the Jupiter Ace by Owen Bishop, very rare book, does anyone have it. Write to Peter Baillie, Flat 119, Mount Lane, Mount Pleasant, Bracknell, Berks

**WANTED** Z88 swap two ZX80's, also Ram pack books, very rare, collectors items. Write to Peter Baillie, Flat 119, Mount Pleasant, Bracknell, Berks. No time wasters please.

**ATARI ST** Software OIDS - £6. Night Raiders - £6. Telephone Brentwood 216112.

**HELP.** My last hope. Can anyone send me the pin-out diagram for the O.E.I. Telemod 2 Modem. I want to connect it to my Amiga. Contact Graham Woodcock, 0226 204147

**WANTED** Apricot F1 Memory Upgrade, also software books, other hardware colour monitor, etc. Ring Barnsley 0226 757835 after

6pm. Please can somebody help me.

**WANTED** 1541 Disk Drive for C64. Tel 0502 713232.

**WANTED** S.O.S. Disk for Apple III and communications disk. Phone John after 7pm 0942 878711

**WANTED** Xectrex Cartridges Phone Melksham 708747 between 6pm and 10pm

**WANTED** PRO Tennis Tour for Amiga or ST. Contact ■ Woodhead, 45 Riddings Court, Annesley Close, Hasland, Chesterfield, Derbyshire, S41 0RQ. Tel 237865. Cash or Swap.

**MULTIFACE** 128K wanted, must be in good condition, ■ offers considered, also wanted "Mutant Monty" Spectrum 48K. Write ■ 137/8 Folkestone Road, Eastham, London, E6 4AZ.

**DESPERATE** student requires 280 Micro Professor to help studies, Manuals and Peripherals welcome. Contact Mr T Wiseman, 19 Foxbush, Hildenborough, Kent, TN11 9HT.

**COLOUR MONITOR** to suite Atari ST, has ■ be cheap! Write ■ Kane, 58C Brooke Court, Highfields, STAFFORD

**I.B.M.** Convertible Twin Drive as new. 512K Battery Pack etc. wanted to exchange for 1640 D.D. Colour PC or similar value around £400. Tel 0268 685366

**OLYMPUS** OM-10 35mm Camera out fit, plus lenses, lights, hard carrying cage. Wanted 1640 DD Colour PC or similar value, around £450. Contact 0268 685366 (Essex).

**WANTED** MSX Cartridges Games Phone 0392 876404.

**AMIGA** contacts wanted for games etc. Wanted - cheap electrical goods (new) and latest videos. Contact Robert, 17, Soudes Place

Drive, Dorking, Surrey, RM4 3ED. Tel 0306 889428.

**AMIGA** games, will swap Strider or Shadow of the Beast for Dungeon Master, Dragon's Lair, ITCD, or F-29 Retaliator or sell. Phone 092 575 4175.

**MEGADRIVE** games, will swap Altered Beast for any of the following. Super Hang On, Super Shindoi, Rambo 3, World Cup Soccer. Phone 092 575 4175.

**WANTED** 24-Pin Epson - Compatible Printer, must be in good condition, Parallel only. Tel Woking 0483 764857.

**WANTED** All Atari XE/XL Games on cassette. Contact Andrew Gilbey, 1 Eastbrook Avenue, Dagenham, Essex

**WANTED** 65 and 67 of NCE, CASLP waiting. Contact Richard Carrington, 4 Beaconsfield Street, Fenham, Newcastle Upon Tyne NE4 5JN.

**SWAP** my 3.5 external Amiga d/drive for your Star LC10 Sheet Feeder. Phone 0703 226957. Ask for Steve.

**WANTED** Amiga 500 Internal Drive mine's knackered!!! Phone 01 684 5138 Ask for John.

**ATARI ST** 1040 STF or FM wanted, will consider non-worker phone Chris Bristol 0272 781178.

**WANTED** MSX Disk Drive + interface ■ just the interface 0302 320215 evenings.

**SPECTRUM** 48K cassettes 17 games 2 utility ■ books £17.50 (+post) the ■ or will split Tel: Rochdale 0706 49535.

**ELECTRON** Solidisc 'EDFS' disc interface wanted. Phone Leeds (0532) 867996 after 6pm.

**WANTED:** Dr. T's MRS Recording Studio will pay £20. Stuart 0621 816400 after 7pm. (Amiga).

**WANTED** Sheet Feeder for an Epson FX-85 printer good price paid. Telephone (0507) 84396 after 6.00pm.

**SWAP** ST New Zealand Story and Zak Mackracken for ST Leisure Suit I, II. Write to Alan 12 Town ST Lound Retford, Notts, DN22 8RN.

**HAS** anybody out there got any word processor software for the Amiga going cheap? (£10-£15). Originals only please. Tel. 061-761 6541 for Richard.

**HAS** anybody got a music utilities ■ program they could swap me for TV sports football and Better Dead than Alien. Tel: Ben 0533 359876.

**WANTED!** Amstrad CPC 464, 664, or 6128 will pay around £100. No games or accessories needed phone Chris on 0245 320203.

**WANTED** for Amiga A500, Bubble Bobble, Cash waiting. Tel (0282) 815194 or write 14 Cobdenst, Barnoldswick, Nr Colne, Lancs. B88 5AJ. For Prompt reply. Ask for Tony.

**WANTED** Up Periscope and Gato for CBM 64 also used 5.25-inch disks for CBM 64 0757 706343 Steve.

**WANTED** disc drives, hard drives etc. Working or not, anything considered. Phone Nahim evenings 0274 492381 Bradford also wanted PCW's interface please call today

**WANTED** Printmaster. From Siren Software 56 Houldsworth Crescent, Coventry. CV6 4HJ. Phone (0203) 362063 Ray Neal.

**£20** reward for the finder of the Data Book for Yamaha V9938 video processor I.C. Phone Wayne on 078481 2581 please!

**DOUBLE SIDED  
DOUBLE DENSITY**

**3 1/2"**

**135 TPI  
100% error  
free fully  
certified**

**FREE LABELS**

**LOW PRICE  
TOP QUALITY  
PRODUCT**

**PROMPT  
DESPATCH**

Bulk 5 1/4 certified  
48 TPI disks  
complete  
packaged in tens.  
£3.13 per pack

**ING  
VAT**

**42p  
EACH**

**DISK STORAGE BOXES**  
40 cap 3 1/2" ..... £3.50  
80 cap 3 1/2" ..... £3.95

**NEW!**  
Mouse pockets £2.95  
Mouse mats £2.64

**PRINTER  
RIBBONS  
LARGE STOCKS  
CALL FOR  
BEST PRICES**

All prices inc VAT. Please add £3.50 post and packing per order.  
£10 for overnight delivery. All offers subject to availability.

**IMMEDIATE MEDIA**  
11 Bakewell Road  
Peterborough PE2 0XU  
Telephone 0733-371-617  
24 hour service

## HAT Software

### New!! Learning to Type

A typing tutor for the young and not so young. Ladies, do you want to return to the modern office but are unsure about your keyboard skills? Brush them up at home. The kids can enjoy the "Shoot 'em up" game to improve their skills and speeds.

Only £14.95, or direct from us at £15.45 inc P & P.

Also JIGSPELL, the spelling support program, FIRST PAINT and STAGE 2, our well established graphics packages, and many more. Send for our full list.

**21, Wyle Cap, Shrewsbury, SY1 1XB  
Tel: 0743 231763**

**16/32 P.D.**

**PUBLIC DOMAIN FOR THE ATARI ST**  
Large Selection  
Prices start from £1.00

Send A4 SAE with 25p stamp for  
catalogue or £1.25 for catalogue  
DISK with extra goodies to:

**35 Northcote Road, Strood,  
Kent ME2 2DH  
Tel: 0634 710 788**

Please state type of disk (single/double sided)



# CROWN

## Communications

OFFICE 4 1548 ASHTON OLD RD OPENSHAW MANCHESTER

OFFICE TEL: 061 371 8269 FAX: 061 371 8254

*Proprietor: P Johnson*

**Are offering the following positions**

### PROGRAMMERS

Programmers are required for the following machines,

- 1) PC (assembly level only)
- 2) Amiga
- 3) Atari ST
- 4) Archimedes

You will be expected to work in an office environment and to work closely with the project manager, the projects you work on (namely games) will last from 3 to 12 months and will be intensive and hopefully breaking new ground with the machine concerned. The pay will be according to experience and will be in the range of £7000 to £12000 per annum.

### GRAPHIC ARTISTS PROJECT MANAGERS

Graphic artists of exceptional quality are also required for the above machines, if you're a wizz kid with the pixels then we want to hear from you, if not then don't bother. Again pay is according to experience and ranges from £7000 to £12000 per annum.

Project managers who have experience with at least two of the above machines are required. The candidates must be able to show management potential as well as have a good programming background. Pay is expected to be around £18000 per annum.

**ONLY IN EXCEPTIONAL CASES** will we look to using a freelance programmer or artist so **don't** build your hopes up on that score.

**We are also interested in looking at completed games with an eye to publishing them and game designs.**

### a word of advice

When sending disks for evaluation remember to label them clearly with both your full name and telephone number, and also the machine format, this prevents your work being ignored.

Programmers please don't just send in demos, ie a bouncing copper routine on the Amiga, this will hardly distinguish you from the crowd. Try to send a sample of a shootem-up you started or better still one you finished.

Try make programs autoloading or use a slide show for Artwork, this saves time when evaluating your work and puts it in a much more favourable light.

Never just turn up on the door step, it is unlikely that the person that you need to see will be available and it won't put you in a good light.

Try not to ask for your disk back and if you must have it back than be sure to send a prepaid envelope with it.

If you want to find out how your work was received then just make a polite call asking if the disk got there okay.

And most of all make sure we can read your hand-writing, a little time on preparing your work could mean the difference between you having the job or not.

If you follow these simple rules then you will find your application a lot more successful with ourselves and probably other companies as well.

**Please send C.V. to: CROWN COMMUNICATIONS,**

Office 4 1548 Ashton Old Rd, Openshaw, Manchester. Or Tel: 061 371 8269 Fax: 061 371 8254



## breath of fresh air

### Computer Graphics Artist

based in the UK. Capable of producing high quality artwork on the Amiga and PC using DPaint.

An eye for detail are essential

Creative designer with fresh ideas

work with PC graphics, old animation, digital video & traditional media

Both positions offer excellent negotiable salaries

If you would like to join an attractive part of the country

exciting team please send enclosing CVs to

Steve Gibson/Matthew Tidbury

AMR Ltd

oly Rooms

Oxon RG9 2BG

## DIGITA INTERNATIONAL

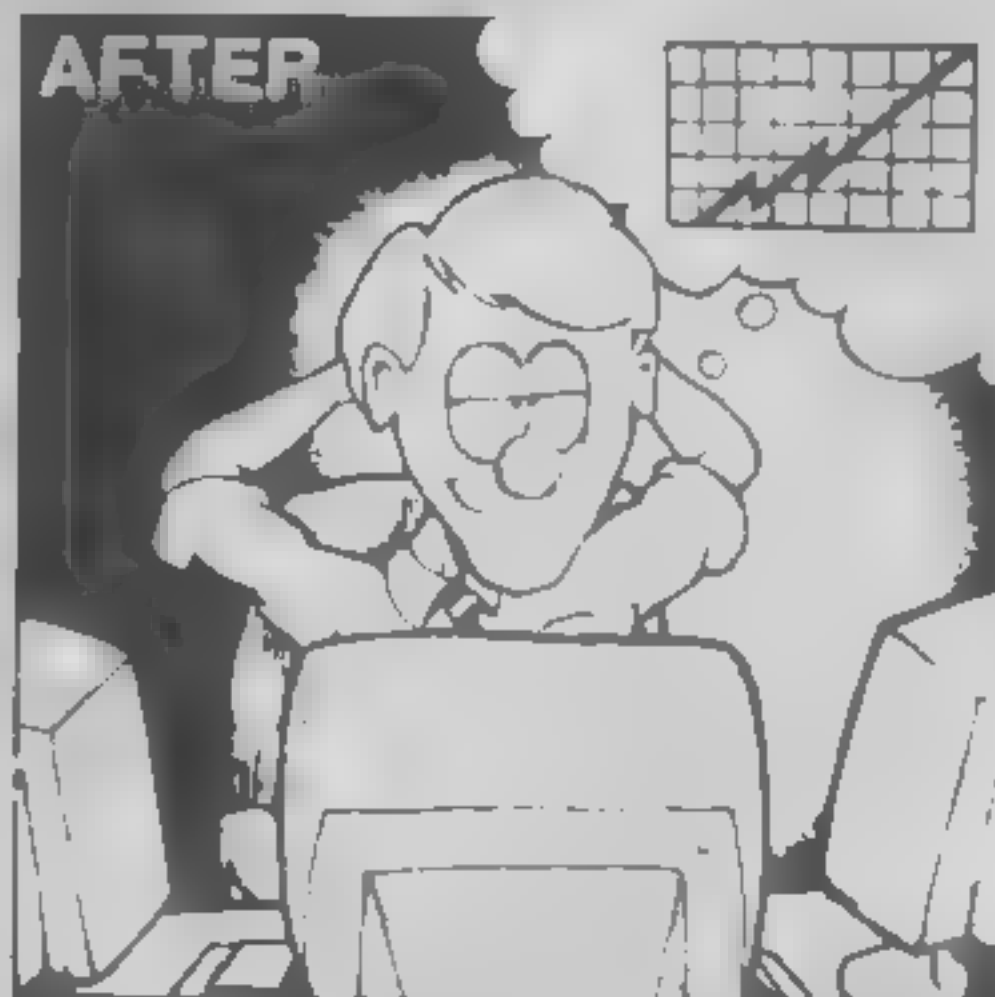
### PROGRAMMERS REQUIRED

Successful expanding software company with a solid commercial reputation require freelance 'C' programmers for business/productivity development. Building on an established best selling range of low cost serious software, you must be able to design, code and document well structured 'C' and be willing to work to our 'house' style. Knowledge of windowing environments, such as GEM, Intuition and Windows would be an advantage. Graphic artists also required.

Interested? Telephone 0395 270273 now!

Digita International Ltd,  
Black Horse House,  
Exmouth, Devon,  
EX8 1JL  
Facsimile 0395 268893

# PROGRAMMERS



## SICK OF LONG HOURS FOR NO EXTRA MONEY?

At Enigma we have a system whereby the faster you can write quality code the more money we pay! We are looking for dedicated people who want to earn a living at coding, not play games. The money is waiting, the work is waiting

all it needs is you!!

RING MARK OR RICHARD NOW



13 North Park Road, Harrogate HG1 5PD  
0423 - 501595, FAX 0423 - 500291



**PALACE SOFTWARE**

Palace Software is a division of the Palace film and video organisation. We are a publisher of high quality computer games, and are looking for key technical personnel to work in our central London offices.

Our current projects are exciting and innovative and you will work in a team environment with some of the best designers, artists and musicians in the business. We are looking for highly motivated and committed individuals with a disciplined approach to work.

**TECHNICAL MANAGER**

A technically-minded person is required to help oversee the development of high quality leisure products. You should be an ex-programmer, with practical working knowledge of 8 bit and 16 bit programming techniques. Some project management experience is desirable.

**PROGRAMMERS**

Experienced programmers are required to work on a variety of creative projects in an in-house team environment. You will have a proven track record of published work. A thorough working knowledge of 68000 and C would be ideal but significant experience on other games computers could be taken into consideration.

Please contact either:  
Patricia Mitchell on 01-278 0751  
Simon Birrell on 01-278 5037

or send your C.V. to  
**Palace Software,**  
The Old Forge, 7 Caledonian Road, London N1 9DX

## URGENT PROGRAMMERS WANTED

Dynamite Designs urgently seek programmers who are familiar with 8 Bit and 16 Bit environments - to work on conversions and project work. We seek programmers for Spectrum, Commodore, Amstrad, ST and Amiga.

If you are interested, please get in touch with Jim Scott on the number below

**Dynamite Designs,**  
19 Oaks Drive, Higham Ferrers,  
North Hants NN9 8EX  
Tel: 0933 57998

## Consult Software Limited

Consult Software Ltd. producers of "Return of the Jedi", "Vidicators" and "Dragon Spirit" require EXPERIENCED programmers coding in Z80/8086/6502/68000 to join our existing in-house team. If you can write quality games within a deadline then we want to hear from you!

Send C.V. and samples of your previous work to:

Glenn Benson  
Consult Software Ltd  
35/36 Hamilton Square  
Birkenhead  
Merseyside  
L41 5BP

Or call Glenn on 051-647 3895

# ARTIST JOB VACANCIES

There are a number of vacancies for talented, experienced computer artists to work on coin-op conversions and major American titles using an in-house Amiga Art System.

Basic salaries range from £7,500 to £11,500, plus a generous royalty programme to boost salaries to in excess of £20,000 OTE depending on productivity.

Accommodation in Royal Leamington Spa can be arranged.

Send some examples of your best work to **David Darling** or **Tim Miller** at:

CodeMasters Software Co.  
Lower Farmhouse  
Stoneythorpe  
SOUTHAM  
Warwickshire  
CV33 0DL.



Phone (0926) 814132, Fax (0926) 817595

PREVIOUS APPLICANTS ARE WELCOME TO RE-APPLY

## PROGRAMMERS

We are looking for talented people to join our successful team in  
**SWITZERLAND!**

A good knowledge of machine code in either Z80, 6502, 8086, or 68000 is required.

**WE ARE WAITING FOR YOU!**

If you think you've got what it takes then contact Mark Grimmer.

Oh! Not to forget, we will pay your flight to the Swiss mountains....



**LINEL,**  
Guetlistrasse, 9050 Appenzell,  
Switzerland.

Tel: 01041 71 87 49 19  
Fax: 01041 71 87 49 21



**URGENT** Hang On for Sega wanted Andy 0283 760783 eves. Other games considered

**SWAP** rare Bowie and Michael Jackson autographed 10 x 8 photos for Atari STE stuff. (Printer, Monitor, disk drive, etc.) Paul 38 Bolan Sqaure, Lochgelly, Fife KY5 9NF

**WANTED** Slogger RX unit for Electron Disc drive support metalwork your offers? Call Ralph 0785 714535 after 6.30pm. Or 021 522 2000 day-time

**ATARI** SM124 Mono monitor wanted will pay up to £50 for good condition. Will pick up West York shire. Call Steve on (0535) 2735) 273810. Evenings only.

**WANTED** for Tandy 1000EX 3.5-inch disk drive phone Chester (0244) 312145.

**WANTED** Games console plus games cartridges. Good prices paid Tel: 0704-79023 (Merseyside). Will collect 50 mile radius.

**WANTED** good working colour monitor for Amiga Swap Hi-Soft, DEVPAK 1, Power Basic, depending on condition must deliver Mr Moodie, 990 Gartloch Rd, Garthamlock, Glasgow G33 5AN

**WANTED** Urgently CBM MPS 803 printer manual please phone with asking price. Someone must have one Tel. Plymouth 786710 (Evenings) 772312x319 (daytime) please.

**SWAP** my 520 STFM Power Pack for your STE. Ring Chas (0284) 752278.

**WANTED** any SEGA or Nintendo cartridges cash waiting or swaps please ring Bill 0706 875941

## ● USER GROUPS

**TURBO**, a Fanzine and PD library for SAM COUPE. Includes interviews with MGT, reviews, news, tips and more. S.A.E. to A. Betts, Healey, Lakeside, Tamworth, B77 2RF.

**ARCHIMEDES** user group required or pen pal for programming, hints. Contact 79, Lundy Road, Longton, Stoke On Trent, Staffs, ST3 2EA. 100% Reply

**LATEST** progs free. Send disks to 82A Vaughan Gardens, Ilford, Essex, IG1 3PD.

**BEST** group in Britain needs more contacts world wide. Write to 28 Bushey Road, Plaistow, London, E13 9EN or Ring 01-472 2673 after 7pm.

**DOES** anyone know of a user group in the Hemel, Watford, Albiens or Luton area or are interested in setting one up for ST's. Ring Steve on 0442 215102.

**BLAST!** is out now with news, reviews, competitions and a free software exchange club. For more details write now: 17 Sacombe Road, Hemel Hempstead, Herts, HP1 3RF.

**AMIGA** contacts wanted, any groups need utilities coding? Then get in touch. Write to Matt, 33 Brookhouse Hill, Fulwood, Sheffield. Or phone 0742 306848.

**AMIGA** contacts wanted to swap stuff. Marky Stuart, 15 Northcote Avenue, Aberdeen, AB1 7TD. Send disks and list please. 100% reply.

**AMIGA** contacts wanted for all new and latest stuff. Lamers accepted. Steven Carlin, 3A Laund Hill, Belper Derbys, DE5 1FH. Tel 0773 821909. Send disks and lists now!

## ● PEN PALS

**AMIGA** contacts wanted, graphic artists, swap-pers send disks 100% return. Must be fast and reliable. Allan 26 Ammerston Road, Middlesbrough Cleveland TS1 5LL.

**DRAGON** 32 contacts wanted, into MK and Basic and games. Want to write a M/C game? Also help given. 01-890 6337.

**ACORN** electron contacts wanted to swap ideas, programs 100% reply write to: Darren Worley, 24

Weatherby, Dunstable Beds LV6 1TW

**PC** contacts wanted? Write to B Guy, Berrylands, Orpington Kent BR6 9TF

**AMIGA** contacts wanted worldwide 100% reply no lamers. Send disks. Write to John 22 Convent Street, Castlesland, Co Kerry Eire

**AMIGA** owners wanted swap old and new stuff Disk(s) ensure reply. Write to Craig Thornton, 11 Dardbury Crescent, Nettleham Lincoln LN2 2QB

**AMIGA** contacts wanted swap the latest. Overseas welcome send your disks or letters to Shane 11 Cadge Road Norwich, Norfolk NR5 8AT

**ST** contacts wanted swap games, tips etc 100% reply. Write to Chris 12 Valerie Close, Fazakerey, Liverpool L10 4XS

**AMIGA** contacts wanted fast. Send disks/lists for a 100% reply to Patrick Hickey, 3 Church Hill, Edinburgh EH10 4BG

**AMIGA** contacts required, write to AXX, AT 38 Westacre Gardens, Yardley, Birmingham B33 8RE.

**EXTREMELY** lonely male computer maniac seeks similar female with messy hand writing for relationship. Call me, Dan on 0536 723610 must Kettering area. Cheers.

**AMIGA** contacts wanted for latest stuff 100% reply. Send discs to Patrick 92 Lennox Road, Portsmouth, Todmorden Lancs OL14 8QD Phone 0706 815467 after 4pm

**AMIGA** contacts wanted must be hot, fast and reliable. Write to JSL 54 Paddocks Lane, Cheltenham, Glos GL50 4NX. Forget lamers! Guyz!!

**AMIGA** contacts P.O. Box, 1025 QLD, Australia 4012. Write now

**ST** contacts desperately wanted! Definate 100% reply. Send games list (if possible). Write to Stephen Dang, 6 Bridge Close, Burgess Hill, W Sussex RH15 8PD

**AMIGA** contacts for both serious and games software. Write to Robert, 43 Ethersall Road, Nelson Lancs BB9 9RP With list or phone me on 0282 691005

**ST** contacts wanted, LSD Medway etc? If so then write now. Guaranteed 100% reply. Write to Mark Anderson, Churchills Hall The Schools, Shrewsbury Salop. SY3 7AT

**AMIGA** contacts wanted. Write to Steve, 12 Ashwell Road, Bury, Edmunds, Suffolk. Also disc of virus killers, 47 programmes, killing known viruses £2.50

**AMIGA** contacts wanted, forget the rest. Send lists, disks to J Auld, Homelea Church Road, Derry Hill, Wilts SN11 9NR. World wide local 100% reply

**AMIGA** contacts to swap software, hints etc. 100% reply, disks etc to Stephenson, The Nest, Llanaber Road, Llanaber, Barmouth, Gwynedd.

**AMIGA** contacts wanted fast reliable. Especially from groups welcome. Gar 31 Foster Street, Brocton, Saltburn Cleveland. TS12 2TR. Disks get priority all letters answered.

**ST** contacts wanted if into Midi, DTP and utilities 100% reply no gamers. Write to Jim, The Caravan, Four Winds, Lower Moor, ST Davids, Haverfordwest, Wales.

**PC** contacts wanted 100% reply, write to B Guy, 8 Berrylands, Orpington, Kent BR6 9TF.

**AMIGA** owner looking for contacts in the UK. Reply to Ian 211 Verity Crescent, Canford Heath, Poole, Dorset BH17 7UA beginners and lamers welcome.

**AMIGA** contacts wanted to swap latest stuff. 101% reply (preferably in Ireland) Send disks, lists to Paul, 17 Beech Park, Viewmount, Waterford, Ireland. Very fast replies.

**WANTED** reliable Amiga contacts to swap games, utilities etc. Please write or phone Mark on 01-398 5167 or write to 54 Grove Way, Esher, Surrey KT10 8HN.

HAVE YOU GOT WHAT IT TAKES TO

# JOIN US AT THE TOP

## ST & AMIGA TECHNICAL STAFF

Silica Shop Ltd are looking for ambitious, technically minded computer users to join our industry renowned technical department, based in Sidcup, Kent.

If you know Atari and Commodore systems, if you are a good communicator and want a varied job, then we can provide you with the kind of opportunities that very few companies can offer.

You will evaluate the very latest software, hardware and computers from Atari and Commodore. This includes PC's and Unix systems, high end Amiga and ST systems, as well as portables like the Portfolio and Stacy. In short, everything from the older 8-bit computers to state of the art transputer systems.

You will use your knowledge and experience to provide end user support to over a third of the UK's ST and Amiga owners. In addition you will provide advice to our Sales, Purchasing and Marketing teams.

Silica have been established for 10 years and with a turnover of over £10 million are the undisputed leaders in the Atari and Commodore market. We provide our staff with all the benefits associated with a large company. These include a subsidised staff restaurant, BUPA membership, air conditioned offices and a relaxed working atmosphere. And, of course, a discount purchase scheme for any of the 3,000 products we stock!

## OTHER VACANCIES

As well as our current vacancies for technical support staff, we are always on the lookout for good people to work in our shops in Central London as well as in our main offices in Sidcup. If you are interested in a career with Silica, we'd like to hear from you. Complete and return the coupon below for a job application form.

# SILICA SHOP



To: DAVID WEST, Silica Shop, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX  
PLEASE SEND ME A

### JOB APPLICATION FORM

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

.....

.....

NCE ..... Postcode: .....



# PLACE AN AD

# FREE!

Selling an old computer?

Need some help?

Got any tips?

Run a bulletin board?

In charge of a consumer group?

After a second-hand bargain?

● You've come to the right place. Just fill in the form to place a free classified advertisement in Shopping Express

● Send your reader ad to:  
Reader Ads Department  
New Computer Express  
30 Monmouth Street,  
Bath BA1 2AP

## READER ADS ORDER FORM

PLEASE TICK THE CATEGORY YOU WANT YOUR AD TO GO IN:

HELP OFFERED      GOODS WANTED ☐    USER GROUPS ☐    BULLETIN BOARDS  
BUGS DISCOVERED ☐    EVENTS      SERVICES      VIRUS WARNIG  
ANNOUNCEMENTS ☐    MINI-TIPS      FOR SALE      PERSONAL

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TEL: \_\_\_\_\_

### Terms and conditions

■ Sorry, NO trade ads. All reader ads must be from private individuals  
■ We cannot vouch for the quality of goods and/or services offered in this section. all ads are accepted in good faith.

■ We reserve the right to amend or refuse reader ads at our discretion

■ No pirated software may be sold through these columns. Any reader being offered non-originals should contact us

■ We cannot guarantee that reader ads will appear in particular issues of Express

■ The following declaration should be signed:

My advertisement conforms to the terms above and is legal, decent, honest and truthful

Signed \_\_\_\_\_




# YOUR ONE STOP SHOP

MORE SOFTWARE THAN YOU CAN HANDLE!  
MORE HARDWARE THAN YOU CAN USE!

## Software

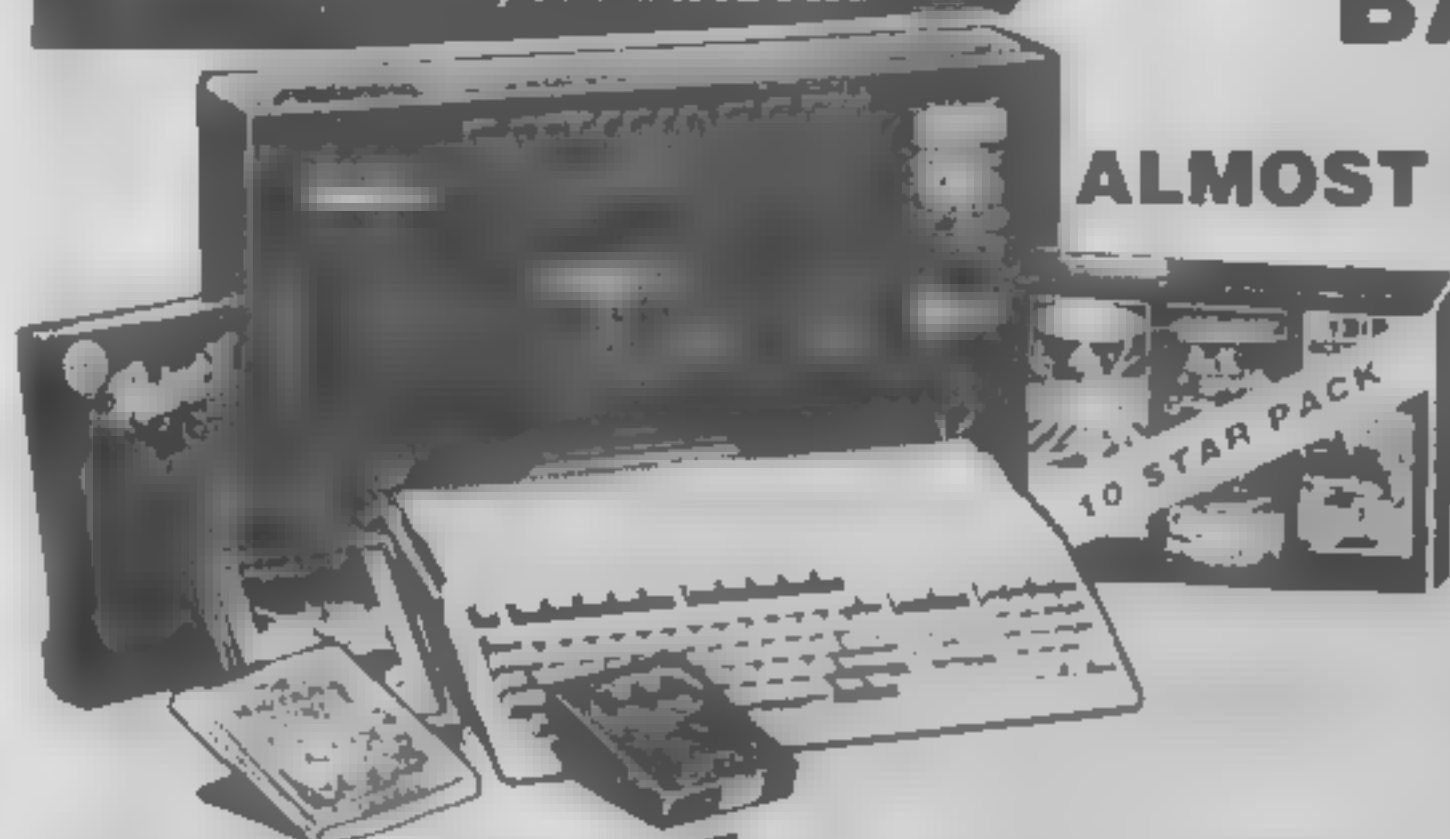
### SUPERSTORE

## AMIGA 512K MEMORY EXPANSION

- Brings your Amiga up to 1 Meg in seconds
- Enable/disable switch. Now you can run ALL software.
- Easy to fit, no technical knowledge needed.
- Reliable, fast, high quality chips on a robust through plated P.C.B. Do not confuse with cheaper, inferior products.
- DOES NOT INVALIDATE GUARANTEE

**ONLY £69.99**

**ONLY £79.99 FOR VERSION WITH CLOCK/CALENDAR**



## AMIGA 3.5" 2nd DRIVE ONLY

**£79.99**

- DISABLE SWITCH
- THROUGH PORT
- SLIM SIZE
- LOW POWER CONSUMPTION
- HIGHLY RELIABLE
- EXCELLENT R/W PERFORMANCE

## ST 2nd DRIVES

ALSO AVAILABLE  
PLEASE ASK FOR DETAILS

WE STOCK MOST  
**DATTEL**  
PRODUCTS

## AMIGA A500 BATMAN PACK

ALMOST **HALF PRICE**

	R.R.P.
A500.....	£399.99
TV MODULATOR.....	24.99
BATMAN (THE MOVIE).....	24.99
NEWZEALAND STORY.....	24.99
DELUXE PAINT II.....	49.99
INTERCEPTOR.....	29.99
TEN STAR PACK.....	229.50
TOTAL R.R.P. ....	£784.44
LESS DISCOUNT.....	£384.45

**OUR PRICE.....£399.99**

\*OR £15 MONTHLY

## 1 MEG AMIGA :-

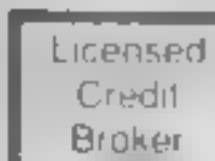
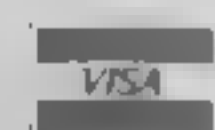
as above plus half meg upgrade,  
mouse, mat, mouse holder, lockable  
disk storage case, dust cover  
and 10 disks

**OUR PRICE**

**ONLY £499.99**

\*OR £19 MONTHLY

**SEGA**  
WE STOCK A  
VAST RANGE  
OF ALL THE  
VERY LATEST  
TITLES



\*(subject to status) Written details on request.

**MAIL**

**ORDER:-**  
Carriage  
at Cost

**ORDER HOTLINE**  
(MON to FRI)

**(0782) 202269**

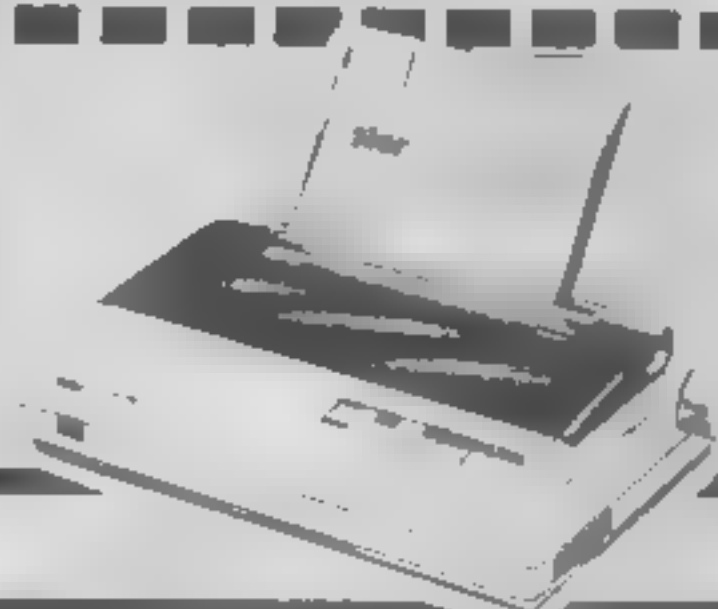
**ADVICE HOTLINE (0782) 268620**  
for FAST & FRIENDLY SERVICE

## CALLERS ONLY

**10 BLANK 3.5" DSDD DISKS**  
CERTIFIED 100% ERROR FREE  
IN A LOCKABLE STORAGE BOX  
COMPLETE WITH LABELS (BOX HOLDS 40 DISKS)

**ONLY £9.99**

WHEN YOU BRING THIS VOUCHER TO ANY OF OUR STORES.  
BUT HURRY STOCKS ARE LIMITED SO ONLY ONE VOUCHER  
PER CUSTOMER SUBJECT TO AVAILABILITY.  
VOUCHER VALID UNTIL 8/3/90



**1 YEAR ON-SITE  
MAINTENANCE  
ONLY £10 EXTRA  
ON ANY PRINTER**

## PRINTERS

### STAR LC10

Acclaimed "Best Buy" budget printer.  
Now massively under-priced at just

**£169.99** \*OR £8 MONTHLY

### STAR LC10 Colour

The perfect printer for every Amiga.  
Colour output from all the better art  
packages - or just slot in a black ribbon  
for word processing. Cheap to run  
too. Very affordable

**£229.99** \*OR £9 MONTHLY

### STAR LC24 - 10

24 Pin quality at a price you can afford.  
■ Fonts, 3 print variations, paper park-  
ing, 170 CPS draft, 57 CPS LQ

**£259.99** \*OR £10 MONTHLY

**FREE Cable with every Printer**

### STOKE-ON-TRENT

Market Square Arcade  
Hanley Stoke-on-Trent  
1000 Wayne Street  
Open 7 Days

### SHEFFIELD

Main Road, Sheffield  
1000 Wayne Street  
Open 7 Days

### ST HELENS

Bakewell Street  
St Helens  
1000 Wayne Street  
Closed Thursday

### STOCKPORT

Mealhouse Brow  
1000 Wayne Street  
Closed Thursday





# ULTIMATE BUSINESS MACHINES



IF YOU THINK YOU HAVE TRIED THE BEST..TRY THE ULTIMATE  
OPEN MON-FRI 9 TILL 6 SATURDAY 9 TILL 1

AMSTRAD	OLIVETTI	COMMODORE	HYUNDAI	SAMSUNG
<b>MODEL MON COL EGA</b> PCW8256 318 PCW8512 399 PCW9512 424 PC1512SD 384 438 PC1512DD 438 514 PC1512HD 559 638 PC1640SD 458 544 628 PC1640DD 518 597 682 PC1640HD 688 778 858 SOFT-INC MON COL 12" 14" PC2086SD 538 618 699 786 PC2086DD 598 678 768 849 PC2086HD 765 851 936 1021 On-Site-Warranty £30 for above Below Inc Maintenance PC1286SD 750 835 920 1005 PC2286DD 851 936 1021 1106 PC2286HD 1021 1106 1191 1276 PC1386SD 1180 1265 1351 1436 PC2386HD 1702 1787 1872 1957	The new Olivetti PCS Range offers unbeatable performance at an incredibly low price. We feel that the PCS range offers you the customer a better deal than is presently on offer from any other manufacturer. 8086 compatible running at 10Mhz, 640K ram expandable to 2.5Mb on motherboard 3 full size slots and on-site warranty makes this the deal of the 90's <b>MODEL MON COL</b> PCS88SD 562 719 PCS88DD 630 803 PCS88HD 803 976 PCS286DD 889 1062 PCS286HD20 990 1149 PCS286HD40 1062 1235 All PCS have VGA Monitors	<b>NEW RANGE</b> <b>MODEL MON COL VGA</b> PC10SD 489 648 668 758 PC10DD 564 699 726 819 PC20HD 889 829 726 964 AT80286 PC30HD 1022 1187 PC40HD40 1399 1599 PC40HD-T 1699 1899 PC50HD Call Call PC60HD Call Call All Commodores come with 12 Months on site warranty	<b>MODEL MON COL EGA VGA</b> XT-S/D 399 549 699 759 XT-D/D 469 609 759 819 XT-HD20 599 749 899 959 XT-HD30 619 769 919 979 All Above have 640K Ram 5 slots 102 Keyboard 10Mhz processor MSDos 3.3 GWBasic 5.25" 360K Floppy. For 3.5" 720K Floppy ADD £30 12 Months on site = £35 <b>PORTABLE</b> LT3 AT 1MB RAM 20MB 1399	<b>MODEL MON COL EGA VGA</b> PC/XT 3001 SD 479 629 799 899 3001 DD 549 699 869 969 3001 HD20 679 829 999 1099 3001 HD30 699 849 1019 1119 AT80286 10Mhz 640K RAM 6001 SD 879 1029 1199 1299 6001 DD 849 1099 1269 1369 6001 HD20 1079 1229 1399 1599 6001 HD30 1099 1249 1419 1619 AT80286 12Mhz 1MB RAM VGA 6512 SD 1099 1249 6512 DD 1169 1319 6512HD20 1299 1449 6512HD40 1349 1499 AT80386 20Mhz 2MB RAM S800DD 1699 1859 1899 All Samsung Computers and Monitors have 12 months On-Site-Maintenance included

STAR	PANASONIC	CITIZEN	H P	EPSON
<b>MODEL SPEED PRICE</b> <b>9 PIN DOT MATRIX</b> LC10 144/38 * 127 LC10-II 180/50 * 150 LC10-Colour 144/38 * 154 LC15 180/45 * 254 FR10 300/76 * 289 FR15 300/76 * 379 <b>24 PIN DOT MATRIX</b> LC24-10 200/87 * 194 LC24-15 200/87 * 324 XB24-10 240/80 * 375 XB24-15 240/80 * 495 <b>LASER PRINTERS</b> LASER 8 8PPM * 1198 LASER 8 D 8PPM * 1685 <b>CONSUMABLES</b> <b>RIBBONS MONO COLOUR</b> LC10 3.50 5.50 LC24-10/15 4.50 FR/XB10/15 6.00 12.00	<b>MODEL SPEED PRICE</b> <b>9 PIN DOT MATRIX</b> KXP1081 144/28 * 123 KXP1180 192/36 * 148 KXP1592 216/45 * 254 KXP1595 288/65 * 314 <b>24 PIN DOT MATRIX</b> KXP1124 182/83 * 225 KXP1540 288/85 * 405 <b>LASER PRINTERS</b> KXP4450 11PPM * 1169 <b>ACCESSORIES</b> <b>RIBBONS S/FEE</b> KXP1081 5.80 KXP1180 5.80 70 KXP1592 5.80 181 KXP1595 5.80 181 KXP1124 5.80 80 KXP1540 6.90 161	<b>MODEL SPEED PRICE</b> <b>9 PIN DOT MATRIX</b> 120D PAR 120/25 * 107 120D SER 120/25 * 124 120D COM 120/25 * 138 180E PAR 173/30 * 128 180E SER 173/30 * 154 PRODUT 9 * 279 SWIFT 24 PIN 160/60 * 245 <b>MANNESMAN</b> MT81 120/25 * 104 <b>HYUNDAI</b> HY910 10" 216/37 * 135 HY920 15" 216/37 * 199	<b>MODEL PRICE</b> THINKJET * 254 QUITEJET * 334 QUITEJET + * 398 DESKJET * 434 DESKJET + * 519 PAINTJET * 644 RUGGED WRITER * 849 <b>HP LASERS</b> LASERJET IIP * 879 LASERJET II * 1248 LASERJET II * 1879 <b>AKHTER</b> ACL135 135/27 * 119 ACL480 10" 480/55 * 299 ACL700 15" 480/55 * 369	<b>MODEL SPEED PRICE</b> LX400 180/30 130 LX850 240/48 199 FX850 264/54 329 FX1050 240/48 393 EX800 300/60 459 EX1000 300/60 599 DFX5000 533/400 1139 LQ400 180/60 209 LQ550 180/60 279 LQ860 280/88 499 LQ1050 264/88 589 LQ1060 280/88 639 LQ2550 400/133 899 TLQ4800 250/83 1499 SQ850 600/198 499 SQ2550 600/198 863 GQ5000 LASER * 938

PRINTERS = \* INCLUDE ON-SITE-MAINTENANCE

A1 PLOTTER	A3 PLOTTER	CANON	DISK DRIVES	MONITORS
HITACHI 674-DB Floor standing A4/A1 4 pen plotter, HP7560B compatible 128K buffered RS232 interface re-plot facility, Auto pen capping Zoom-up/down facility 400mm/sec 0.025 resolution 61 built-in character sets LCD menu driven display 12 Months on-site-replacement optional 1MB buffer upgrade £2999	HITACHI 681-XA Desk top A4/A3 4 pen plotter HP7475A compatible 400mm/sec speed RS232/Parallel interface 19 Built in character sets 8K buffer 0.025" resolution Soft pen landing (Quiet) Weight - 6.5Kg £599	<b>MODEL PRICE</b> <b>LASERS</b> LBP4 4PPM * 869 LBP8-III 8PPM * 1359 LBP8-III 8PPM * 1764 LBP8-III 8PPM * 1909 <b>SCANNERS</b> IX-12 ROLLERBED 374 IX-12F FLATBED 665 IX-31F INTERFACE 99 OCR SOFTWARE 304 BUBBLEJETS BJ-130 528	3.5" 720K INTERNAL 59 3.5" 1.44MB INTERNAL 69 5.25" 360K INTERNAL 39 5.25" 1.2MB INTERNAL 59 3.5" 720K EXTERNAL 135 5.25" 360K EXTERNAL 69 5.25" 1.2MB EXTERNAL 95 40MB TAPE STREAMER 249 32MB HARDCARD 40MS 199 AMIGA 2ND DRIVE 3.5" 65 ATARI 2ND DRIVE 3.5" 73 AMIGA/ATARI 42MB H/D 399	<b>MONOCROME</b> PHILIPS 7513 12" GRN 71 MITSUBISHI 112" GRN 85 <b>CGA</b> PHILIPS 6833 14" 199 <b>EGA</b> ECM 5400 14" 249 <b>VGA MONO</b> SAMSUNG 2611 85 <b>VGA COLOUR</b> ECM 5413 14" 259 <b>MULTI-SYNC</b> MTS 9600 14" 309

W/P	DATABASE	SPREADSHEET	DTP/GRAPHS	UTILITIES
GEM 1ST WORD + V2 134 LOTUS MANUSCRIPT 269 MULTIMATE ADVANTAGE 299 PROF WRITE V2.1 169 SMART WP inc Spellcheck 150 SMARTWARE II WP 150 BORLAND SPRINT 120 TURBO LIGHTNING 39 SUPERWRITER 117 WORD V5 259 WORDCRAFT V6 261 WORDPERFECT V5.1 255 WORDSTAR PROF V5.5 189 WORDSTAR 2000 + R3 245	ASPECT 377 CARDBOX PLUS V4 238 PERSONAL CARDBOX + 93 CLIPPER 305 DATAEASE V4 417 DATAFLEX DEV 399 DATAFLEX R/T 155 DATA PERFECT 280 dBASE IV 320 dBASE IV DEV 499 dBASE V1.3 179 DELTA 5 365 FOXBASE PLUS V2.1 257 FOXPRO V1 387 PARADOX 3 357 PARADOX 2 270 RETRIEVE III 99 RETRIEVE IV 209 SMART DATA MANAGER 270 SMARTWARE II DATA MAN 270 SUPER dB 170	EXCEL V2.1 257 HAL 90 INWORD 46 LOTUS 1-2-3 REL 3 259 MULTIPLAN V4 98 PC PLANNER 129 PFS PROF PLAN 126 PLAN PERFECT V5 168 QUATTRO V1 60 SIDEWAYS 35 SILVERADO FOR 123 125 SMART SPREADSHEET 185 SMARTWARE II SPREAD 225 SUPERCALC 5 238	TIMEWORKS 69 BYLINE 126 db PUBLISHER 275 FINESSE V2 97 GEM ARTLINE 334 GEM DTP V2 233 GEM SCAN V1.1 67 PAGE ABILITY 115 ALDUS PAGEMAKER 3 450 VENTURA 2 520 WORDCRAFT ELITE V4 519 OFFICE PUBLISHER 327 3B2 V2 780 CHART 3 183 CHART MASTER 127 CONCORDE V3 420 DRAW APPLAUSE 310 FREELANCE PLUS V3 265 GEM DRAW PLUS V2.01 134 GEM PRESENTATION V3.1 267 GRAPH WRITER 265 HARVARD GRAPHICS V2.1 217 SIGN MASTER 95	AGENDA 220 CLAM 105 EUREKA 78 FASTBACK PLUS 95 IZE 195 MACE UTILS 53 MAGELLAN 69 NETWORKER PLUS 155 MENUGEN 40 METRO 55 NORTON UTILITIES 45 NORTON ADVANCED 67 NORTON COMMANDER 35 NORTON EDITOR 35 OFFICE WORKS 185 OVERDRIVE 41 PC TOOLS DELUXE V5.5 64 REFEREE 37 SIDEKICK PLUS 78 SIDEKICK 36 SUPERKEY 36 ULTRALOCK 128 XTREE V2 32 XTREE PRO 60

LANGUAGES	INTEGRATED	SCOOP PURCHASE
BASIC COMPILER V8 146 C COMPILER V5.1 202 COBOL COMPILER V3 358 FORTRAN COMPILER V5 202 MACRO ASSEMBLER V5.1 75 PASCAL COMPILER V4 137 QUICK BASIC V4.5 49 QUICK PASCAL 49 SORT V1.01 98 TURBO ASSEM-DEBUG 78 TURBO BASIC 36 TURBO BASIC DB TOOLS 36 TURBO BASIC ED-TOOLS 36 TURBO C PROF V2 120 TURBO C V2 80 TURBO PASCAL V5.5 80 TURBO PASCAL PROF V5.5 120 TURBO PASCAL DEV LIB 138 TURBO PASCAL DB T/BOX 36 TURBO PASCAL ED T/BOX 36 TURBO PASCAL GAMES 36 TURBO PASCAL GR/TBOX 36 TURBO PROLOG 60 TURBO PROLOG T/BOX 36	ABILITY 59 ABILITY PLUS 115 FIRST FRAMEWORK 56 FRAMEWORK III 325 LOGISTIX 115 OPEN ACCESS II PLUS 357 PFS FIRST CHOICE 76 SMART SYSTEM V3.1 350 SMARTWARE II SYSTEM 348 SYMPHONY V2 370 WORKS V1 94 <b>ACCOUNTING</b> NEW SAGE STERLING RANGE BOOKKEEPER 64 PAYROLL 2 129 JOB COSTING 129 ACCOUNTANT 162 ACCOUNTANT PLUS 259 FINANCIAL CONTROLLER 324 <b>SPECIFY 3.5"/5.25"</b>	<b>COMPUTER, PRINTER &amp; SOFTWARE BUNDLE</b> <b>£299 + VAT</b> SANYO MBC 550 COMPUTER, MSDOS 2.11, 12" AMBER MONITOR, 135CPS DOT MATRIX PRINTER WORDSTAR WORD PROCESSING AND CALCSTAR SPREADSHEET-HURRY WHILE STOCKS LAST <b>ULTIMATE BUSINESS MACHINES LTD</b> 5 WATER STREET EARBY COLNE LANCASHIRE BB8 6QP TELEPHONE <b>(0282) 843001</b> <b>VISA &amp; ACCESS</b> <b>DELIVERY CHARGES UK MAINLAND</b> NEXTDAY 4-DAY HARDWARE £15 £10 + VAT SOFTWARE £10 £8 + VAT CONSUMABLES £5 £3 + VAT <b>TERMS</b> All prices exclude VAT & Delivery charges. Strict Cash with Order. Visa/Access welcome. Cheques made out to Ultimate Business Machines Ltd. Official orders from Government, PLC's & Educational bodies accepted. Callers welcome but by appointment only



**W**hen you decide to buy an IBM-compatible PC, one of the biggest problems can be working out how to get your all your lovely data into it – your letters, files, novels, catalogues and suchlike. You have hardware and software which can manipulate information in all sorts of clever ways, but if you can't get the data into the machine in the first place, you may as well have saved your money. After all, if a computer can't process information it's just an expensive piece of tin.

If you have never used a computer of any sort, all your data will be held on old technology media (or 'paper', as it used to be called). To get it in PC format, the simplest route is to re-type it. This can be pretty time-consuming if 10 years of card records or deathless prose need to be computerised, but the only obvious route out is to pay someone (a temping agency, say) to do the work for you. This takes you less time but costs a lot more – ultimately, the decision is yours.

If, on the other hand, your data is already held on a computer you can usually transfer it from that machine to your PC. One of the advantages of the PC's remarkable world-wide success is that methods exist for getting data to and from the PC from just about every sort of computer that has ever existed.

### STANDARDS

It all comes down, once again, to standards. Throughout the computer world, the nearest there is to a hardware standard for data interchange is the RS232 port, also known as the serial interface. This is a socket on the back of most microcomputers (and an increasing number of larger machines). In theory, you should be able to plug a cable into both machines and then transfer your valuable information down it.

In practice, the RS232 port is such a vague standard, you have to be very careful about the design of your cable. The best thing to do is to tell your friendly neighbourhood dealer which machines you want to tie together and then get them to make you an appropri-

ate cable – it shouldn't cost more than about £15.

The software standard is ASCII (American Standard Code for Information Interchange), a series of 255 codes representing letters, numbers and things like carriage returns, which was described in *Express* 68. This is the lowest common denominator of micro files. It is unsophisticated – not allowing you to retain bold or italics, for example, but widely accepted in the computing fraternity.

In general, you can only transfer your data, not your programs. Each different computer uses different program instructions, and most of these are incompatible – so no, you can't get your favourite BBC word processor on to your IBM clone. However, some languages – such as BBC BASIC – are so common that versions exist for them on all sorts of computers. So yes, you can port all those schooldays listings onto the PC.

### SOFTWARE

In principle, the PC can communicate with other machines without specialist software, courtesy of the MS-DOS `COPY` command. In fact, the process is so error-prone that it is best to shell out a few bob on some dedicated software. The PC standard is probably *Mirror 2*, from Softklone. However, the public >

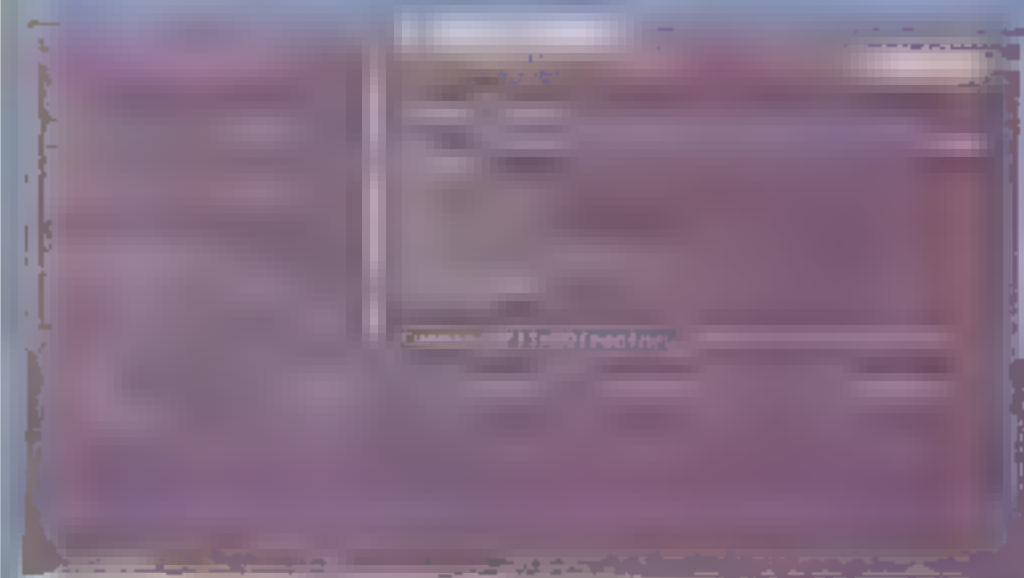
Serial ports come with a range of sockets, make sure you buy the right lead.

# MAKING THE CHANGE

The last in the series of articles on the PC compatible family looks at ways of getting valuable data into the PC from other machines. Mike Hardaker is your guide through the jungle of serial leads...



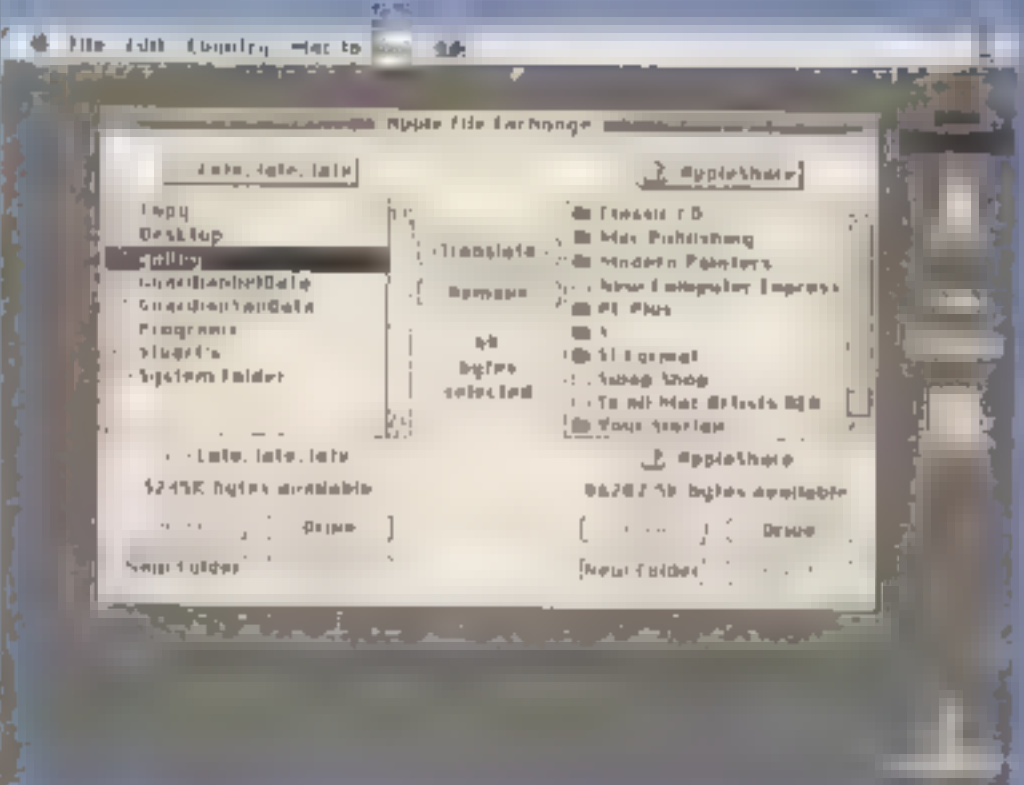
## COMMUNICATIONS SOFTWARE



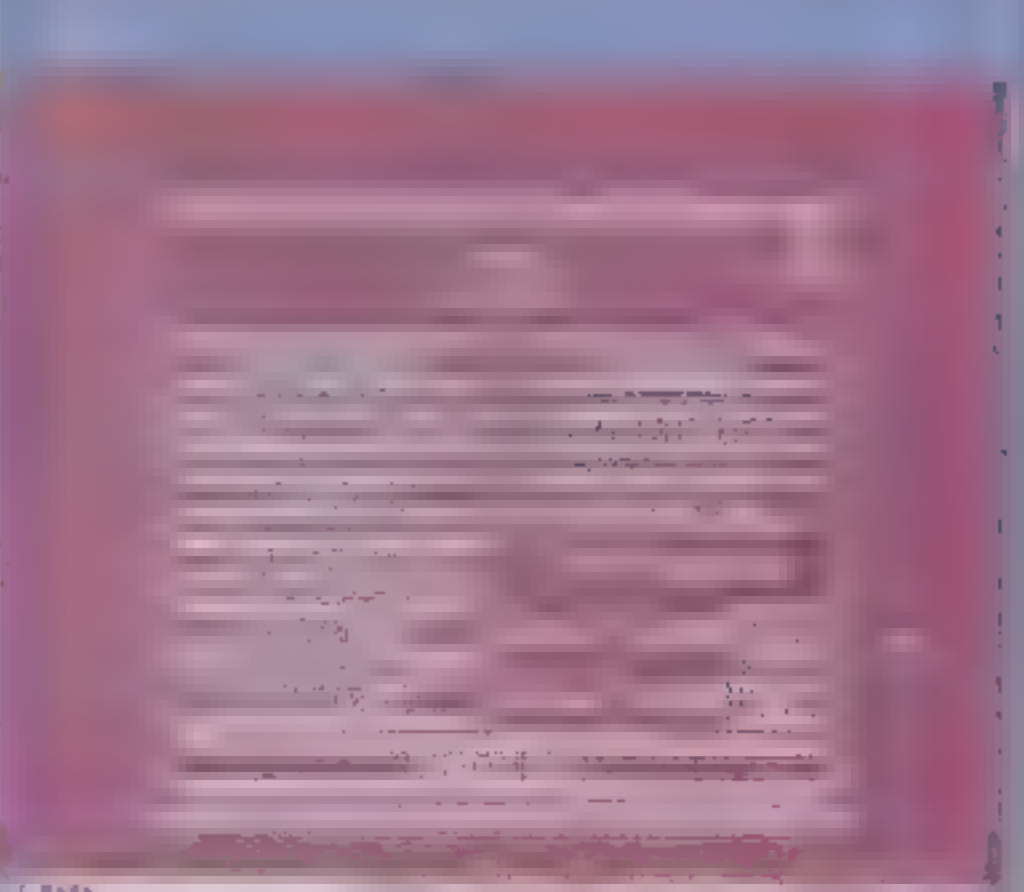
• **Mirror 2** is probably the commonest PC file transfer program. It offers all the facilities you need for moving data between machines. Version 3 will be out soon. When choosing a program look for Kermit and X-modem compatibility.



• **Access!** is the best software file transfer package for the Amiga. It can be used for logging on to a bulletin board via a modem, or for direct file transfer with a serial cable.



• Modern Apple Macintoshes can read and write 3.5-inch PC disks with the aid of Apple File Exchange, free with every Mac. For serial file transfer, the shareware program Red Ryder offers all the facilities you need.



• **220ST** for the Atari ST allows you to use the popular X-modem protocol, which permits rapid error-free file transfer. To use this option your PC software must be similarly blessed.

domain utility *Kermit* is something of a universal standard and the shareware program *ProComm Plus* is very highly regarded and pretty inexpensive. Get one of these and you won't go far wrong.

### AMIGA

An RS232 port is built in to the Commodore Amiga. Use the *Access!* program from PD libraries as your preferred software. Alternatively, *CrossDos* from Power Computing allows you to read and write MS-DOS format 720K 3.5-inch disks on the Amiga's disk drive.

### ATARI ST

The ST can already read and write PC format 3.5-inch 720K disks. Alternatively – if you have 5.25-inch disks – use the PD *Uniterm* package or a professional package such as *220ST* and an RS232 cable.

### APPLE MACINTOSH

The SE/30 and the later Mac IIcx and IIci machines can read PC format disks, courtesy of the *Apple File Exchange* utility which comes on the system disk. Otherwise, you can use *Red Ryder* software or the more specialised *MacLink*, together with the omnipresent RS232 cable. Alternatively, a COPYIIPC Option Board fitted in a PC will allow it to read and write Mac format 3.5-inch disks. This is pricey, but handy if a lot of transfers are involved.

### ACORN / BBC B

The Beeb's RS232 port is also non-standard, based in design on a DIN plug. It is there, however, and with an appropriate cable you can tie the thing up to a PC. The *CommStar* package (which is ROM-based) is recommended for the BBC, with the PC running the comms program of your choice.

### AMSTRAD PCW

You need to buy an RS232 port for about £60, as it is non-standard on the PCW – look at the ads in *Express* or specialist magazines like *8000 Plus*. The *Selsio* program on the PCW's CP/M disks should provide you need to get going. Alternatively, try *Dialup* (from PMS Communications) or the PD alternatives if you want more function than is bundled with CP/M.

### AMSTRAD CPC

Like the PCW, you have to buy the RS232 interface – Pace, Amstrad and KDS are recommended suppliers and you should expect to spend less than £50. CP/M can do the software business here too. Siren Software is shortly expected to offer a £20 utility for the CPC which will allow it to read and write MS-DOS disks – although you will need an external 3.5-inch or 5.25-inch drive on your Amstrad.

### SINCLAIR QL

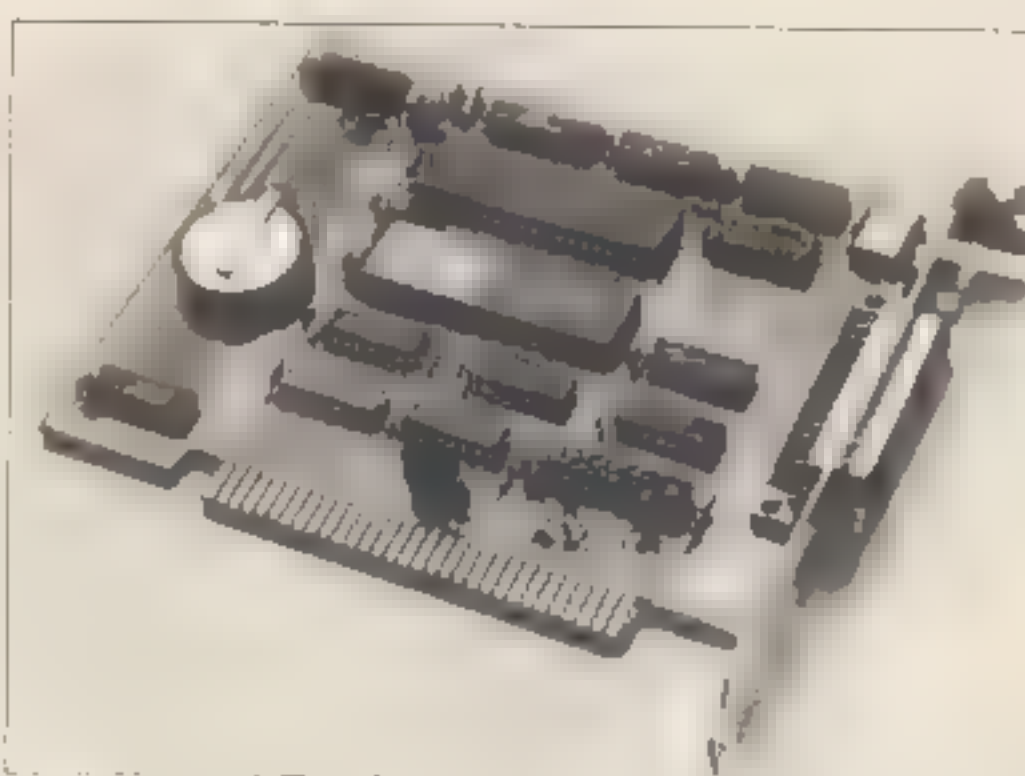
This has another non-standard RS232 port, using phone jacks this time – again, a special cable will be needed. The machine's operating system handles the communication – although *Qualsoft* is a more powerful communications package for the specialists who demand extra power. It's business as usual at the PC end of the wire.

### SINCLAIR SPECTRUM

Interface 1 for the old Speccy includes an RS232 port, which is all the extra hardware you need. The Plus 2's hardware is much like the QL's, described above. For communications software, contact user groups or PD libraries for the latest information.

### COMMODORE C64

Once again, you'll need to buy an RS232 interface (try Datel) for about £30. The C64 User Group is the prob-



• Before you can use a serial cable you will need a serial port. Most PCs come with one, but you can add an RS-232 socket with a board like this one.

ably the best place to try for the appropriate software – look for Kermit compatibility.

### MSX

The MSX 2 can read and write 3.5-inch PC disks. Otherwise, you may or may not have to buy an RS232 interface (the Toshiba HX22 has one, other machines don't). You also may or may not have to get some software – try *Communications* for tape-based systems. Wasn't MSX supposed to be a standard?

### ARCHIMEDES

PC owners who have 3.5-inch disks can use Acorn's *PC Emulator* on the Archimedes to read and write PC disks directly. If you have 5.25-inch disk drives on your PC, try Technomatic's *ArcComm* and the good ol' RS232 cable.

### OTHER MACHINES

There are so many weird and wonderful micros out there, it is impossible to give notes on everything. If your old machine is still being made, ask the manufacturer what to do. If it's an olden goldie, try your dealer, or otherwise look for user groups or bulletin board Special Interest Groups. If you're desperate, find someone who will regard it as an intellectual challenge to solve your problem.

### THE BUREAU ALTERNATIVE

If you are ditching your old micro, you may find the cheapest way of getting your data on to a PC is to pay someone else to do the work – check out the adverts in *Express* or look in the Yellow Pages under 'Computer Services'. Although the deal may seem pricey, it could cost less than buying extra hardware and software for on-off transfer.

If you have previously been using a computer bureau to do your data processing, you may have an impressive-looking set of eight-inch disks or big spools of tape. In this case, you have no option but to consult a 'data migration' expert – it's Yellow Pages time again.

### BULLETIN BOARDS

If you have a modem, you can always upload the data from your old machine to a bulletin board or conferencing facility (such as CIX). You can then sign on to the board with your PC attached and download the data again. This is probably the most straightforward method of getting your data from one machine to another. It's cheap, too – as long as you don't have to pay peak-rate phone bills.

### DOING IT BY HAND

If you haven't got much data, haven't got much money, but you do have lots of time, then the cheapest way of getting your information from one micro to another is just to re-type it. It's boring, gives you sore wrists and takes up all your evenings, but it is cheap. ■



# AT MICRONET WE'RE REALLY TALKING!

**FREE MODEM**  
with annual subscription

**W**ith Micronet you can turn your computer into a communications terminal that will download free software, access up-to-the minute computing information, play exciting multi-user games, talk to other people (and computers) and a lot more.

And if you pay for a year's subscription in advance we'll even give you a modem free when you join.



## FREE SOFTWARE

On Micronet you can browse through an extensive software library of free programs, select one and then download it.

We now have software for all popular machines, from the Spectrum to PC compatibles, including the Atari ST and the Amiga.

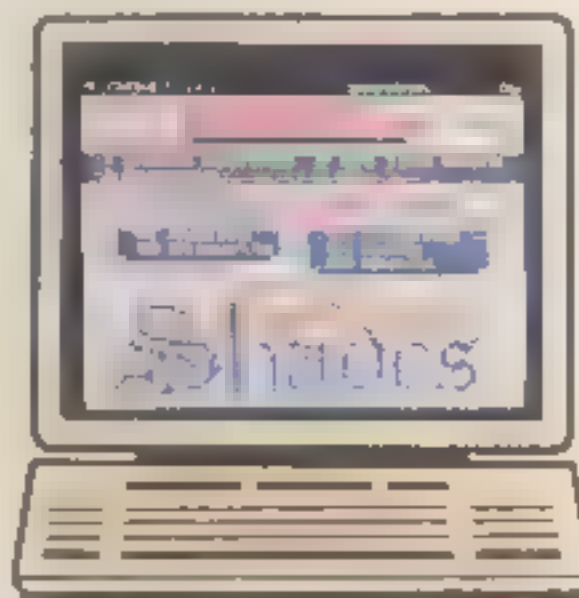


## INFORMATION

Micronet is also a computer magazine. Our computer news area is updated every day, so there's no better way to stay up-to-date, and our software reviews and features for all popular micros mean Micronet members are

always better informed.

Add to this Prestel's massive database and you'll have all the facts at your fingertips.



## ENTERTAINMENT

But Micronet is not just informative, it's also a lot of fun! As a member you'll have access to a range of games, including the UK's most popular multi-user game, Shades, where the action is live and so are your opponents!



## COMMUNICATIONS

And with Micronet you can use your computer to communicate with thousands of other users. From electronic mail, telex and fax to chatlines and teleconferencing, Micronet lets you do the talking.

## Low Cost

A Micronet subscription, which includes Prestel, costs just £23 a quarter, and using Micronet starts at only 55p an hour including telephone charges! Wherever you are,

Micronet is just a local phone call away.

Just phone our Sales Desk free on 0800 200 700 or clip the coupon today for a free brochure and details of how you can get a free modem.

**Join Micronet, and get talking!**

## FREE DEMONSTRATION

If you have access to a modem (1200/75 baud) and viewdata communications software you can see a free demonstration of Micronet. Just Dial 0272 250000 and use the ID 44444444 and password 4444.

You can look up a local telephone number once on-line.

Return to: Micronet, Units 8/10,  
Oxgate Centre, Oxgate Lane, London NW2 7JA

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Tel. No.: \_\_\_\_\_ Age: \_\_\_\_\_

Machine Type: \_\_\_\_\_



NCE 22

**MICRONET**

Free modem offer available in the UK only to new members while stocks last. Minimum subscription period 1 year.



SALE ★ SALE ★ SALE ★ SALE

# MEGA DISCOUNT!

**THE BEST QUALITY 5 1/4" DISKS EVER SOLD BY US -  
NOW EVEN LOWER PRICES!**

## 5.25" Disk and Box Offers

10	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box.....	£9.95
30	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box.....	£13.95
50	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box.....	£16.95
70	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box.....	£22.95
90	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box.....	£27.75
100	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box.....	£29.95

You can choose any size or type of disk box to go with your disks completely FREE!

All our disks are 100% certified and error free. Each disk comes with user labels and comes with our lifetime guarantee

**NOW EVEN LOWER PRICES ON OUR TOP SELLING LINES!**

## 3.5" Disk and Box Offers

20	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box.....	£16.95
30	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box.....	£19.95
40	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box.....	£25.95
50	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box.....	£29.95
60	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box.....	£34.95
70	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box.....	£39.95
80	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box.....	£44.95
90	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box.....	£49.95
100	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box.....	£54.95

You can choose any size or type of disk box to go with your top quality disks completely FREE! All our disks come complete with labels and our lifetime replacement guarantee.

## THE HIGH DENSITY DISK AND BOX OFFER!

ALL DISKS SUPPLIED ARE TOP QUALITY, 100% ERROR FREE AND SUPPLIED WITH LABELS. THE BEST DISKS AT THE BEST PRICE!

QTY	DESCRIPTION	SIZE 5 1/4"	3 1/2"	QTY	DESCRIPTION	SIZE 5 1/4"	3 1/2"
10	High density disks with free disk box	£13.95	£17.95	75	High density disks with free disk box	£49.95	£74.95
25	High density disks with free disk box	£19.95	£34.95	100	High density disks with free disk box	£59.95	£109.95
50	High density disks with free disk box	£34.95	£59.95				

You can choose any storage box to go with your disks FREE from our large range

## BRANDED 3 1/2 DISKS

3M  
SONY  
VERBATIM  
KODAK  
DYSAN

ONLY  
£12.95  
PER BOX  
OF 10

WE ALSO  
SUPPLY  
PRINTER  
RIBBONS P.O.A

NO  
MIN  
ORDER

## DISK STORAGE BOXES

3 1/2" 10 Capacity*	£2.49
3 1/2" 40 Capacity	£5.95
3 1/2" 80 Capacity	£7.95
5 1/4" 10 Capacity*	£2.49
5 1/4" 60 Capacity	£6.25
5 1/4" 80 Capacity*	£6.95
5 1/4" 100 Capacity	£7.49
5 1/4" 120 Capacity	£7.95

ALL  
BOXES  
COME  
WITH  
KEYS  
AND  
DIVIDERS  
EXCEPT \*

## BARGAINS

5 1/4x80 Cap non lock disk box	£6.59
5 1/4x10 Cap library case	£1.15
Atari ST replacement mice with mat and bracket	£24.95
10 Cap disk rack with desk tidy	£4.95
80 Col wire printer stand	£6.95
180E Video tapes 3 for	£6.95

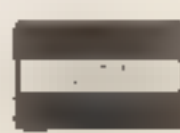
## ACCESSORIES

Mouse mats (boxed)	£3.49
Mouse brackets	£3.49
4 player cables Amiga/Atari	£3.95
Atari J/5 - mouse ext cable	£3.95
Cleaning kits 3" - 3 1/2" - 5 1/4"	£2.95
Thingi Copy Holders	£4.95
Computer labels per roll of 1000	£9.95
Listing Paper 11x9 1/2	
60gsm box of 2000	£15.90

**FREE CAR PHONE WITH EVERY ORDER  
OVER £100.00**



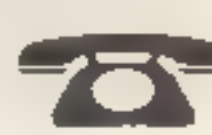
Same day  
despatch



All prices include VAT and Track Back delivery - for  
overnight please add £5 per order

\* Subject to fitting by  
Phonetech Communications, Peterborough.  
E & OE Prices correct at time of going to press.

**0262 679640**



**F.M. Computer Supplies**

Lancaster House,  
Lancaster Road, Carnaby Industrial Estate,  
Bridlington, N. Humberside. YO15 3QY.  
Fax: 0262 602620

SALE ★ SALE ★ SALE ★ SALE

SALE ★ SALE ★ SALE ★ SALE ★ SALE ★ SALE ★ SALE ★ SALE

SALE ★ SALE ★ SALE ★ SALE ★ SALE ★ SALE ★ SALE ★ SALE



# FREE! TENSTAR PACK WORTH OVER £229



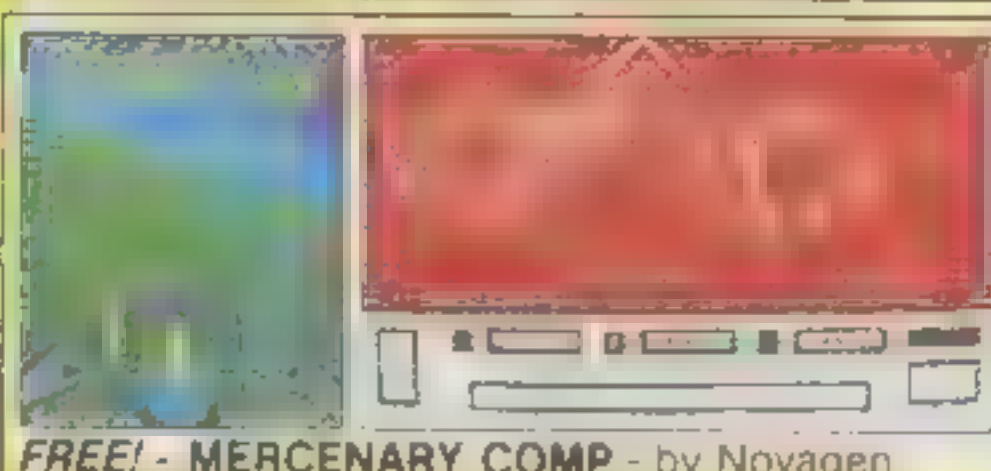
FREE! - AMEGAS - by Players



FREE! - INSANITY FIGHT - by Microdeal



FREE! - ART OF CHESS - by SPA



FREE! - MERCENARY COMP - by Novagen



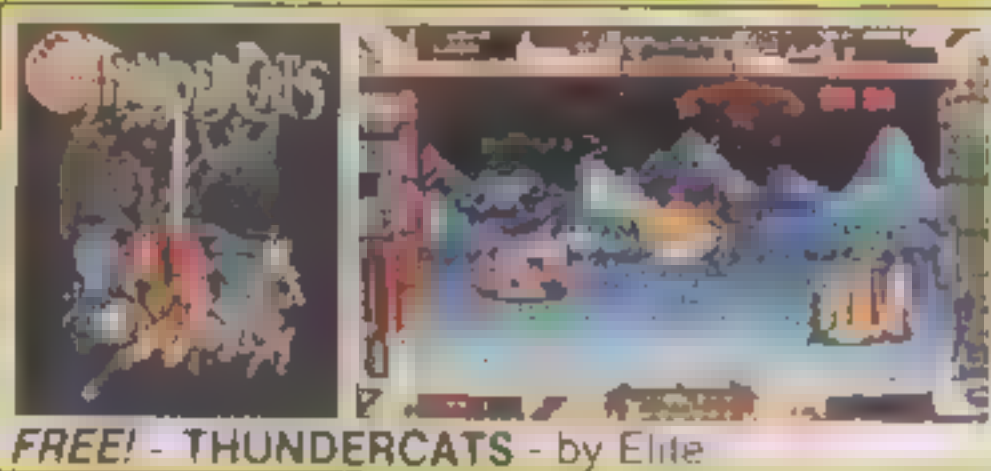
FREE! - BARBARIAN, ULT WARRIOR - by Palace



FREE! - TERRORPODS - by Psygnosis



FREE! - BUGGY BOY - by Elite



FREE! - THUNDERCATS - by Elite

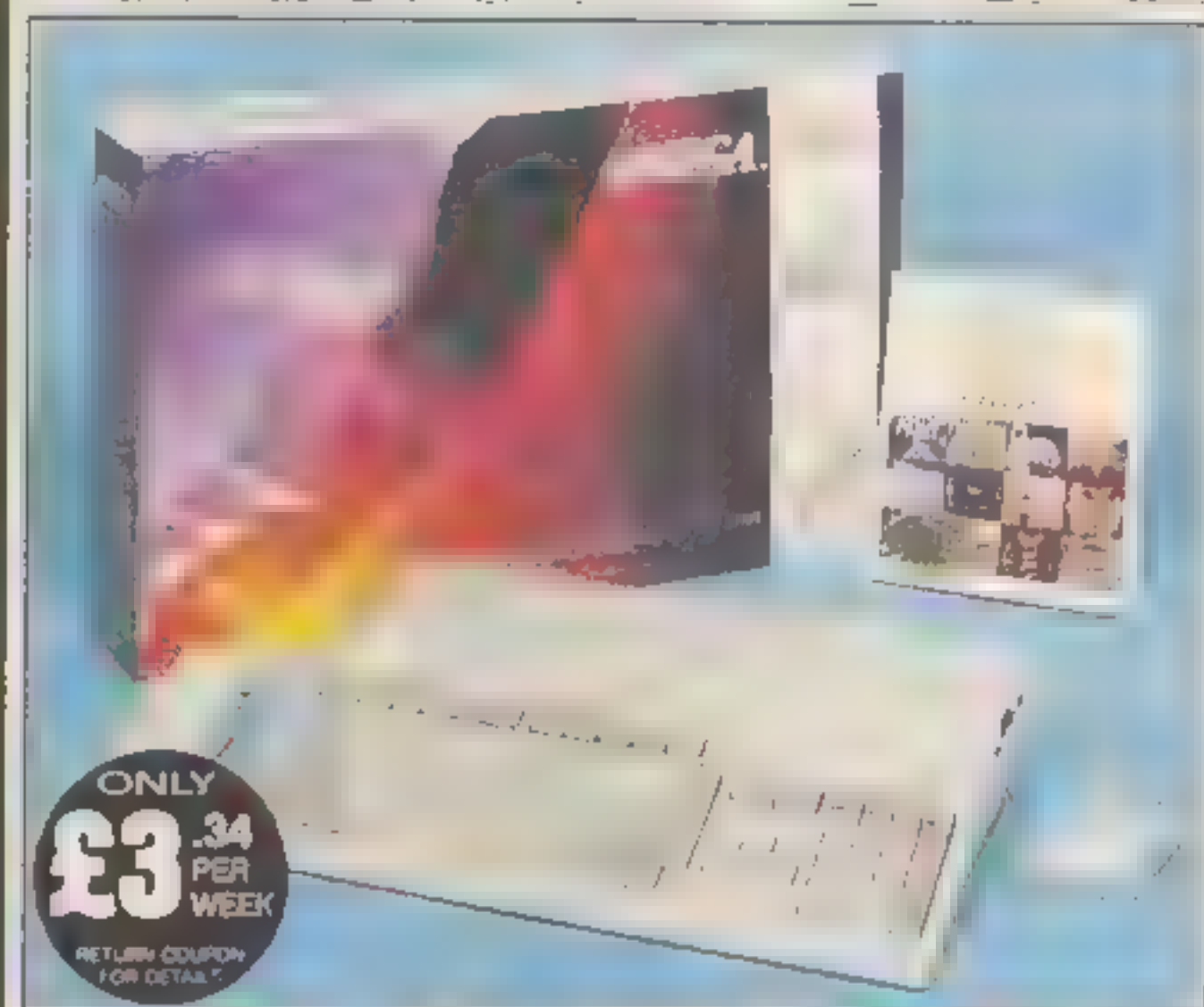


FREE! - IKARI WARRIORS - by Elite



FREE! - WIZBALL - by Ocean

# Commodore AMIGA



ONLY  
**£3.34**  
PER WEEK  
RETURN COUPON FOR DETAILS

# £346.95

**£399**  
INCLUDES  
FREE UK  
DELIVERY

The Amiga 500 is one of a new breed of technologically advanced computers, which are now emerging as the new standard for home computing, based around the new Motorola 68000 chip. The A500 has 512K RAM and a 1Mbyte double sided disk drive built-in. It can be connected directly to a wide range of monitors, or to a domestic TV set through a TV modulator. Designed with the user in mind, the A500 features a user friendly WIMP environment and comes supplied with a free mouse. And, when you buy your Amiga from Silica Shop, the UK's No1 Amiga specialists, you will experience an after sales service that is second to none, including a technical support helpline and free newsletters and price lists. Return the coupon below for our current information pack, which will give details of the Silica service and the very latest Silica Amiga offers. E&OE

## WHY SILICA SHOP?

Before you decide when to buy your new Commodore Amiga computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer as well as expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Amiga related products in the UK, a full time Amiga specialist technical support and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established in the home computer field for ten years and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. Here are just some of the things we can offer you.

**THE FULL STOCK RANGE:** The largest range of Amiga related peripherals, accessories, books and software in the UK.

**AFTER SALES SUPPORT:** The staff at Silica Shop are dedicated to help you to get the best from your Amiga.

**FREE NEWSLETTERS:** Mailed direct to your home as soon as we print them featuring offers and latest releases.

**FREE OVERNIGHT DELIVERY:** On all hardware orders shipped to Silica Shop customers within the UK mainland.

**PRICE MATCH PROMISE:** We will normally match our competitors offers on a 'same product same price' basis.

**FREE TECHNICAL HELPLINE:** Full time team of Amiga technical experts to help you with your technical queries.

But don't just take our word for it. Complete and return the coupon below for our latest Amiga literature and begin to experience the Silica Shop specialist Amiga service.

## PHOTON PAINT PACK

A500 Computer	£399.99
TV Modulator	£24.99
Photon Paint	£69.95
TenStar Pack	£229.50
<b>TOTAL RRP:</b>	<b>£724.43</b>
<b>LESS DISCOUNT:</b>	<b>£325.43</b>
<b>PACK PRICE:</b>	<b>£399</b>

## 1084S MONITOR PACK

A500 Computer	£399.99
1084S Colour Monitor	£299.99
Photon Paint	£69.95
TenStar Pack	£229.50
<b>TOTAL RRP:</b>	<b>£999.43</b>
<b>LESS DISCOUNT:</b>	<b>£350.43</b>
<b>PACK PRICE INC VAT:</b>	<b>£649</b>

## FREE FROM SILICA

When you buy the Amiga 500 from Silica Shop you will not only get a high power, value for money computer, we will also give you some spectacular free gifts. First of all, we are now including a TV modulator with every A500 stand alone keyboard, so you can plug your Amiga straight into your TV at home (the modulator is not included with the A500+A1084S pack as it is not required for use with monitors). Secondly, we have added a free copy of Photon Paint, an advanced graphics package with an RRP of £69.95. Last (and by no means least!), so that you can be up and running straight away we are giving away the sensational TENSTAR GAMES PACK with every A500 purchased at Silica Shop. This pack features ten top Amiga titles which have a combined RRP of nearly £230! Return the coupon for details.

## FREE TENSTAR PACK

When you buy your Amiga 500 from Silica Shop we want to make sure you get the best deal possible. That is why we are giving away the TENSTAR GAMES PACK worth nearly £230 absolutely FREE with every A500 purchased from us. The TenStar Games Pack includes ten titles for the A500 each individually packaged in its own casing with instructions.	
<b>Amegas</b>	<b>£14.95</b>
<b>Art Of Chess</b>	<b>£24.95</b>
<b>Barbarian, Ult Warrior</b>	<b>£19.95</b>
<b>Buggy Boy</b>	<b>£24.95</b>
<b>Ikari Warriors</b>	<b>£24.95</b>
<b>Insanity Fight</b>	<b>£24.95</b>
<b>Mercenary Comp</b>	<b>£19.95</b>
<b>Terrorpods</b>	<b>£24.95</b>
<b>Thundercats</b>	<b>£24.95</b>
<b>Wizball</b>	<b>£24.95</b>

**TOTAL RRP: £229.50 INC VAT**

If you already own an Amiga computer and would like to be registered on our mailing list as an Amiga user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist Amiga service that is second to none.

## SILICA SHOP

<b>SIDCUP (&amp; Mail Order)</b>	<b>01-309 1111</b>
1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX	
OPEN: MON-SAT 9am - 5.30pm	LATE NIGHT: FRIDAY 9am - 7pm
<b>LONDON</b>	<b>01-580 4000</b>
52 Tottenham Court Road, London, W1P 0BA	
OPEN: MON-SAT 9.30am - 6.00pm	LATE NIGHT: NONE
<b>LONDON</b>	<b>01-629 1234 ext 3914</b>
Selfridges (1st floor), Oxford Street, London W1A 1AB	
OPEN: MON-SAT 9am - 6.00pm	LATE NIGHT: THURSDAY 9am - 8pm

To: Silica Shop Ltd, Dept NCE 0390 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX  
**PLEASE SEND ME FREE LITERATURE ON THE AMIGA**

Mr/Mrs/Ms: Initials: Surname:

Address:

Postcode: Dept NCE 0390

Do you already own a computer  
if so, which one do you own?



• A helium atom, holder of the lowest boiling point record. Dedication indeed.

# PURE GENIUS

Andy Storer takes a spin with the latest addition to the Guinness Disc, a strong library of CD-ROM titles. The form is the future.

**Y**ou might be forgiven for wondering why *Express* is covering the *Guinness Disc of Records*, as it needs a Macintosh with a minimum of 1Mb of RAM and requires a CD-ROM drive. The answer is simple. This CD-ROM is a good indication of the kind of material we will see becoming available for PC, Amiga and Archimedes owners in the next year or so.

Able to hold 4,000 colour images or the equivalent of 1,500 floppy disks of data, the potential for reference sources is enormous. For instance, *Computer Library* is a single disc containing the full text of eight computer magazines over a 13-month period offering 43,000 articles with a seek time of less than 10 seconds. Were the magazines stacked on your shelves they would stretch for 63 feet! But other applications will be forthcoming too – massive games are only one of the areas which are coming to fruition now.

## EXPANDING

With CD-ROM units available for as little as £350, and the catalogue of titles rapidly expanding, it's a matter of time before mixed media offerings become affordable. *The Guinness Disc* retails at £60 – a pittance when one considers the byte-per-pound value. For all in all there are over 120Mb of text, colour photographs, animation, music and sound effects on the five-inch disc. What's more there's a super-fast text search routine which allows you to access any subject in seconds.

Some two years in development, the disc is a faithful translation of the 6,000,000-selling book and is organised around three main subject headings – Natural, Physical and Sporting. Navigation through the vast data structure is via a *Hypercard* front-end which allows you to click on icons representing various search and retrieval criteria. *Hypercard* is ideal for this

kind of application since it's able to treat data of any form – text, animations, colour images – uniformly, and the simple click-and-play interface is ideal for the computer novice.

## INNOVATIVE

*The Guinness Disc* is innovative as a CD-ROM because it represents the material it contains as an interactive encyclopaedia. The book format is followed pretty closely with each main category having a contents page which can merely be clicked on to advance to subsequent levels. Each contents card has an index icon that gives you the option of browsing through the pre-written indexes of What, Where and Who before clicking on a topic to find all the references to your particular choice. Likewise you can hit an icon to search for any particular word or subject across the whole of the disc.

Taking the book analogy further there's even an icon which takes you to a random position in the data as if you had just opened the real book for a lazy browse. This feature has also been extended to incorporate a random slide show of the pictures present on the disk. When you see a picture that interests you all

you have to do is click on it and you are taken to the Record associated with it.

The Record screens themselves are largely composed of scrollable text windows with the occasional animation, or photograph requiring an overlaid screen. CD-quality stereo sound accompanies most animations and some of the records relating to music and speech. Excerpts from Holst, Handel, Shostakovich and Stravinsky sit side by side with the sounds of cicadas, sonic booms and world's fastest backwards talker. Altogether there are 20 minutes of animation representing 4Mb of data, running via *Macromind Director*, and over 300 colour pictures taking up over 60Mb of the disc. ■

## PAGE COUNT

*The Guinness Disc* comprises 120Mb of data representing 1,357 files. Of this 72Mb are taken up by colour slides and 9Mb consisting of animations and tables. The Records data itself is held in one file which is some 19Mb in size!

## ANYONE FOR A GUINNESS?

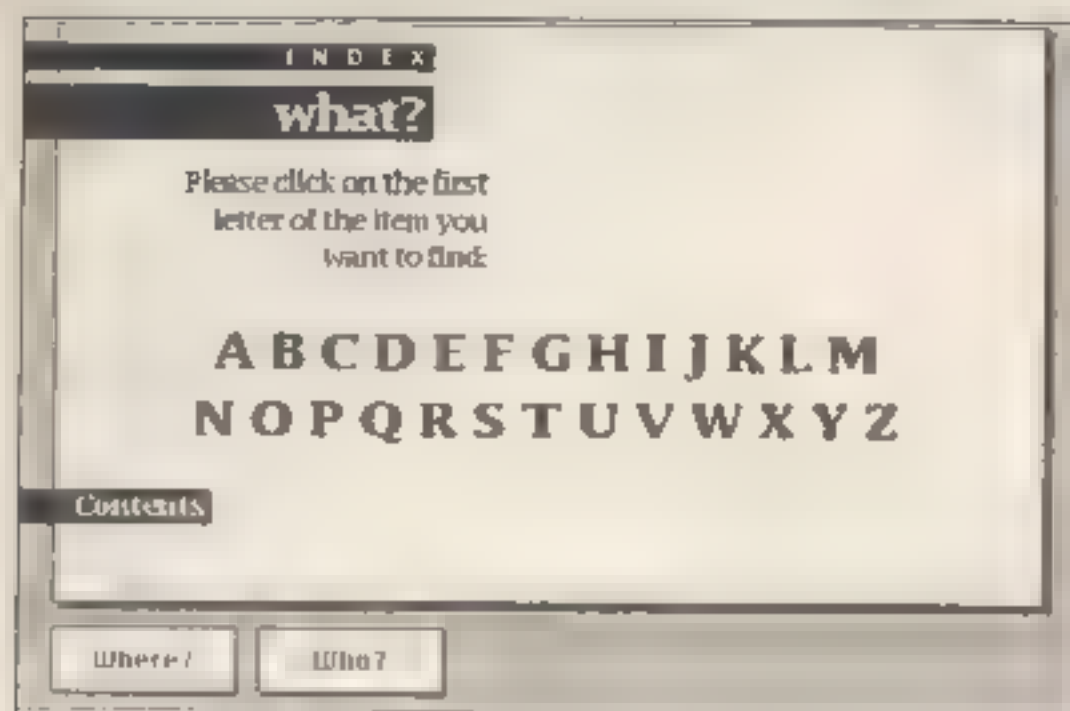
Archimedes machines as these both have CD-ROM drives. Whether this title will make it to the Amiga CD is open to question. However, the Amiga is beginning to become well-supported in the States as a multimedia machine. Indeed it's a catchphrase money well made.

Archimedes machines as these both have CD-ROM drives. Whether this title will make it to the Amiga CD is open to question.

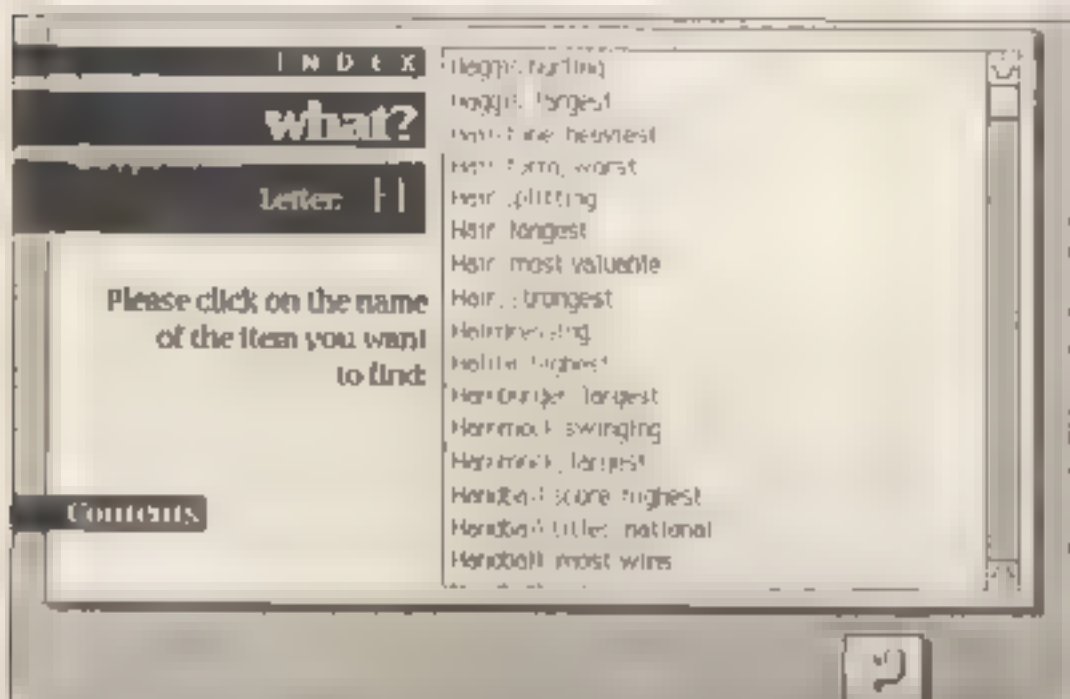
However, the Amiga is beginning to become well-supported in the States as a multimedia machine. Indeed it's a catchphrase money well made.

Archimedes machines as these both have CD-ROM drives. Whether this title will make it to the Amiga CD is open to question. However, the Amiga is beginning to become well-supported in the States as a multimedia machine. Indeed it's a catchphrase money well made.

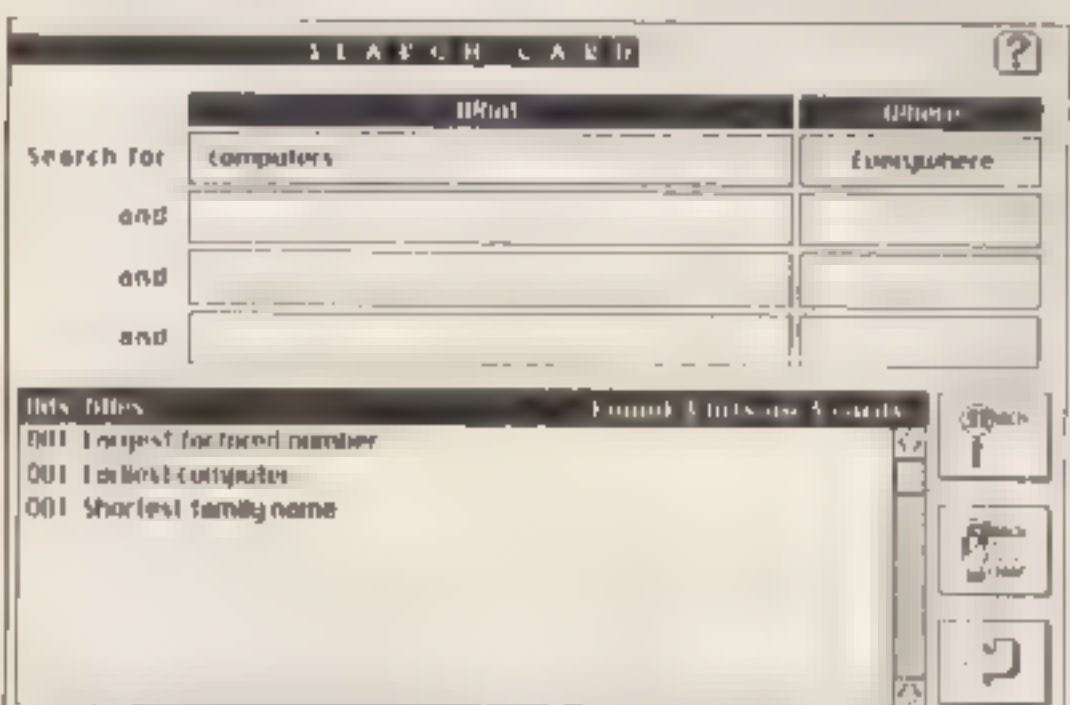




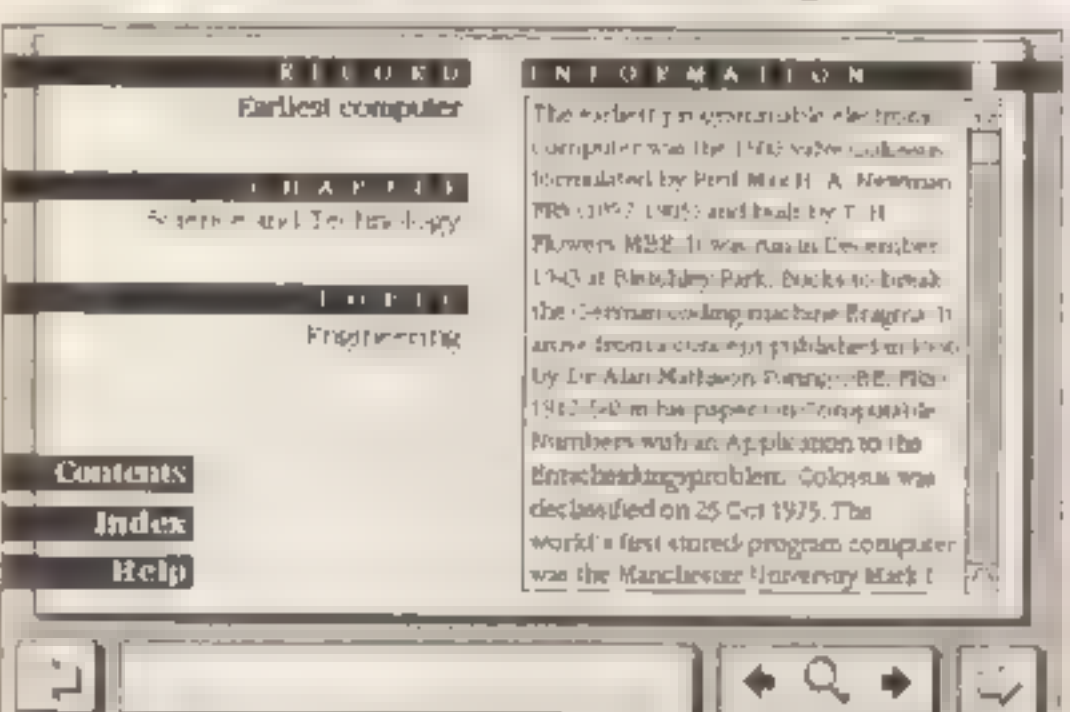
• Individual Records can be chosen alphabetically, after first having selected the category from What, Where and Who. Then the initial letter is picked.



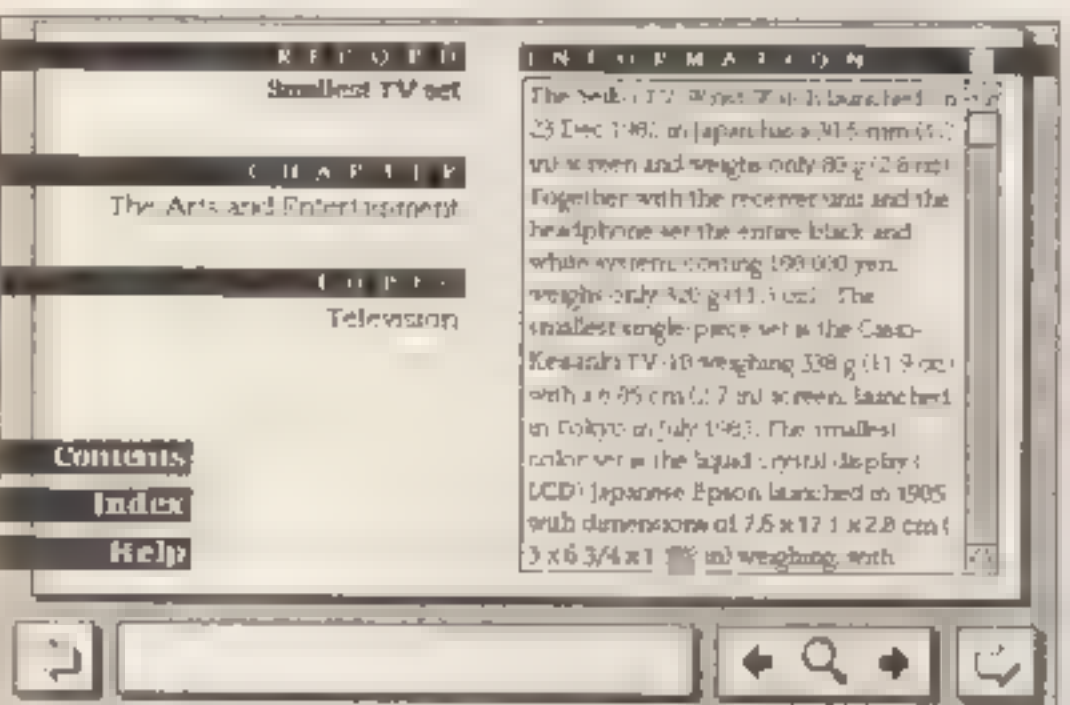
• You are then presented with a list of all the topics beginning with that letter. As you can see, the list is comprehensive enough.



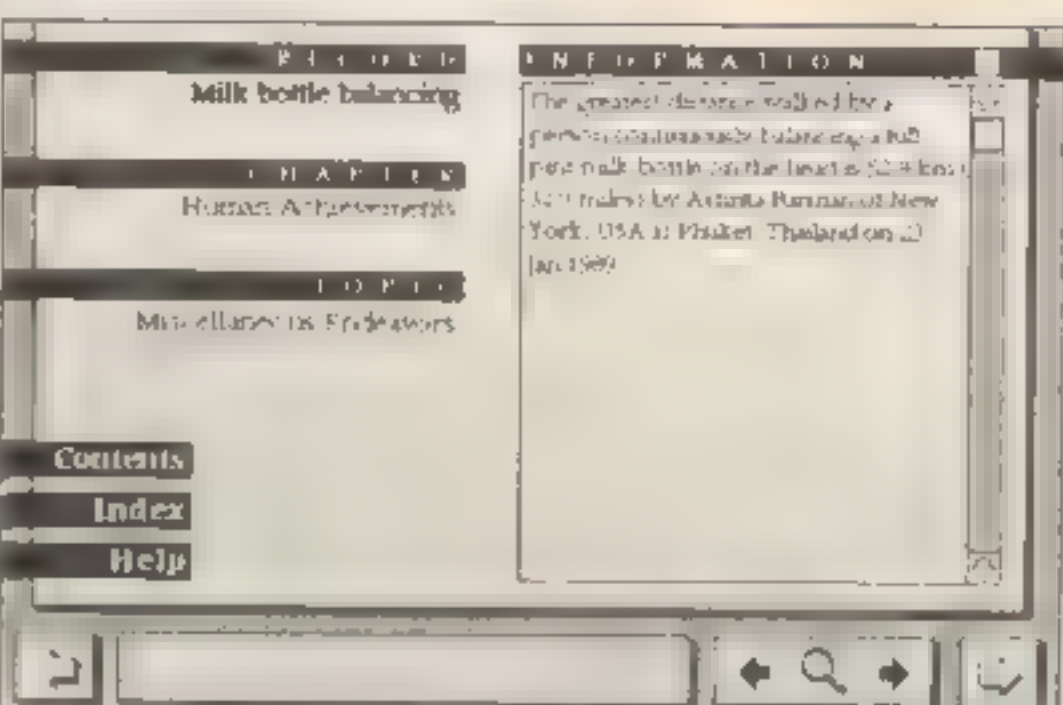
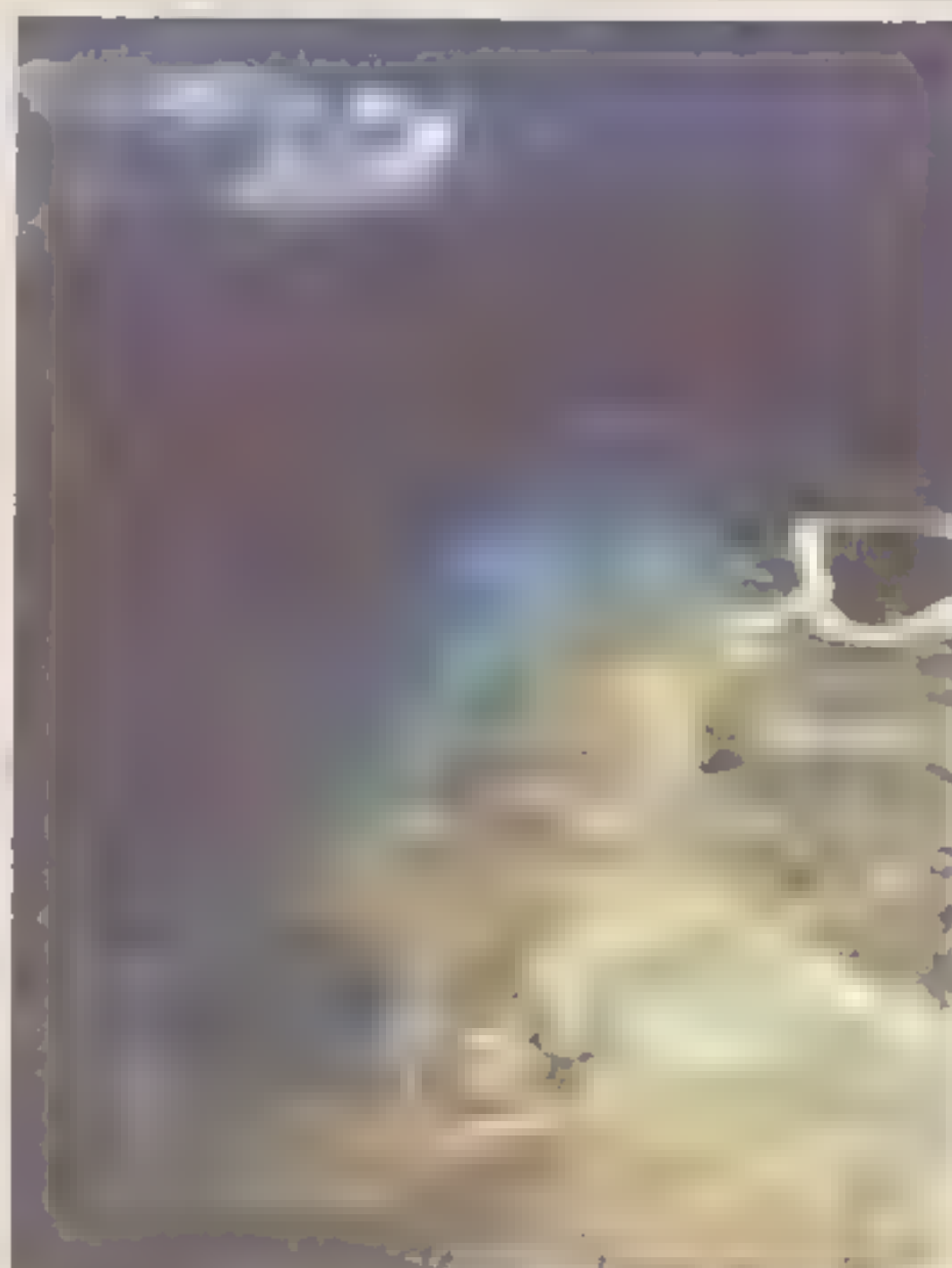
• The entire disc can be searched for any keyword, which will find a reference buried deep in the text of a Record. The found records can then be flicked through.



• The Record itself is displayed on the right-hand half of the screen. The scroll bar by the side lets you read the rest of the text.

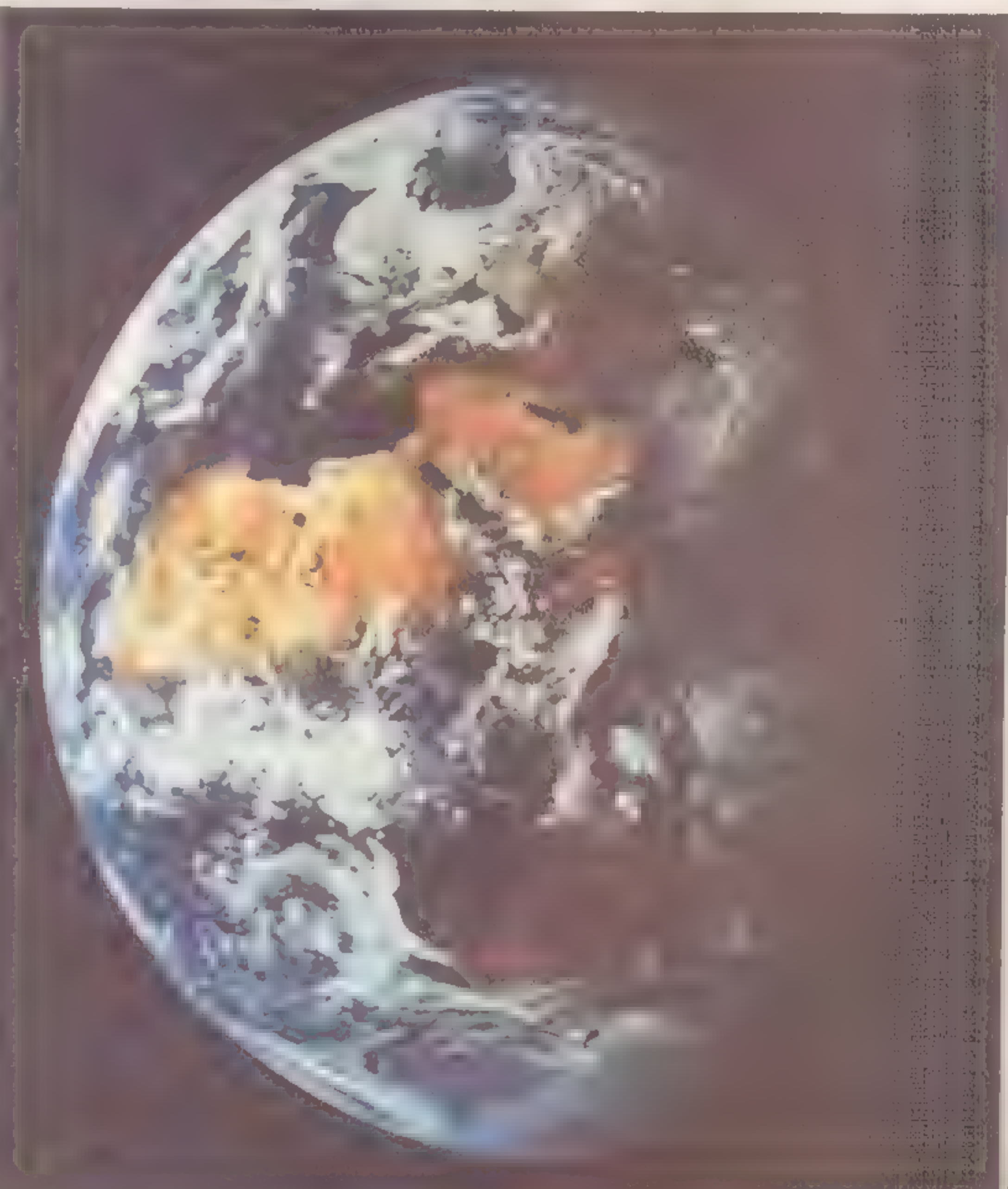


• The large arrows take you forwards and backwards through the Records. Clicking on the magnifying glass lets you do a keyword search of the record, and find other references in other files. The rest of the bottom line is used for icons indicating the presence of accompanying pictures, music or animations.



• The Guinness Disc of Records is liberally illustrated with excellent digitised colour photographs and animated presentations.

From a Record screen – such as that for the longest distance walked with a milk bottle on your head (left) – you can call up the corresponding picture (above). A slideshow lets you browse through the pictures, like this aerial shot (above left) and the planet from space (below).





# LAUNCH into the nineties, a new decade of BARGAINS!!

## OFFER 1:

Double Sided 31.2" Discs, Individually Wrapped, 880k 135 tpi, ideal for Amiga, ST, etc., Blue, Pin No., made in Japan, 100% Error Free, 2 for 1 Warranty or money back.

10 x 3.5"	£4.90
25 x 3.5"	£11.95
50 x 3.5"	£23.50
100 x 3.5"	£45.95
250 x 3.5"	£109.95
500 x 3.5"	£209.95
1,000 x 3.5"	£395.00

## OFFER 2:

Genuine "Sony" 3.5" Discs Double Sided, made in Japan, sold in Sony outers, probably the best disk in the World!

10 x 3.5"	£5.90
25 x 3.5"	£14.35
50 x 3.5"	£27.59
100 x 3.5"	£53.95
250 x 3.5"	£133.95
500 x 3.5"	£256.95
1,000 x 3.5"	£483.50

3 1/2"  
DISKS FROM  
39 1/2p

## OFFER 3:

5.25" Double Sided 48 96 tpi for IBM PC and Clones, Etc., 100% Error Free, 2 for 1 warranty or money back.

25 x 5.25"	£7.95
50 x 5.25"	£14.95
100 x 5.25"	£28.40
250 x 5.25"	£70.50
500 x 5.25"	£135.00
1,000 x 5.25"	£260.00

Complete with Labels, envelopes & w.p.'s

## OFFER 4: High Density Discs.

when only the Very Best will do.

5.25" HD 1.6mb 3.5" D.SHD 2mb.  
for IBM, AT, Etc. made in Japan,  
HD in corner of Disc.

10 x 5.25" HD	£6.95	10 x 3.5" HD	£13.90
25 x 5.25" HD	£16.25	25 x 3.5" HD	£33.50
50 x 5.25" HD	£31.95	50 x 3.5" HD	£65.00
100 x 5.25" HD	£59.95	100 x 3.5" HD	£121.95
250 x 5.25" HD	£144.95	250 x 3.5" HD	£292.50

Including Labels,  
Envelopes & w.p.'s

100% Error Free 2 for 1 Warranty

## OFFER 5: 'Keep your data safe'

Top Quality Anti Static Lockable Disc Boxes, complete with 2 keys. Small or Large Capacity, ideal for Home or Office use!

3.5" x 40 Capacity	£3.95
3.5" x 80 Capacity	£4.95
3.5" x 100 Capacity	£5.95
5.25" x 70 Capacity	£3.95
5.25" x 100 Capacity	£4.95

## OFFER 6: Accessories:

Sourced from the world's leading manufacturers, Quality and Price Guaranteed. Buy with Confidence

14" Monitor Stand	£14.95
Universal Screen Filter	£14.95
3.5" or 5.25" Cleaning Kit	£1.95
Mousemat	£2.95
200 Labels	£2.99
Roll of 1,000 Labels	£7.50
PC or Amiga Cable	£5.95
Mouse House/Bracket	£2.95
Printer Stand with Tray	£13.99
Printer Stand	£11.95

Four Good reasons for choosing Original Media as your Supplier.

- 1 No Minimum Order.
- 2 Access and Visa accepted
- 3 Next Day Delivery (if order placed before 2.00 p.m.)
- 4 Free Helpful Advice



Post add £2.95 per order.  
Next Day Courier £7.95

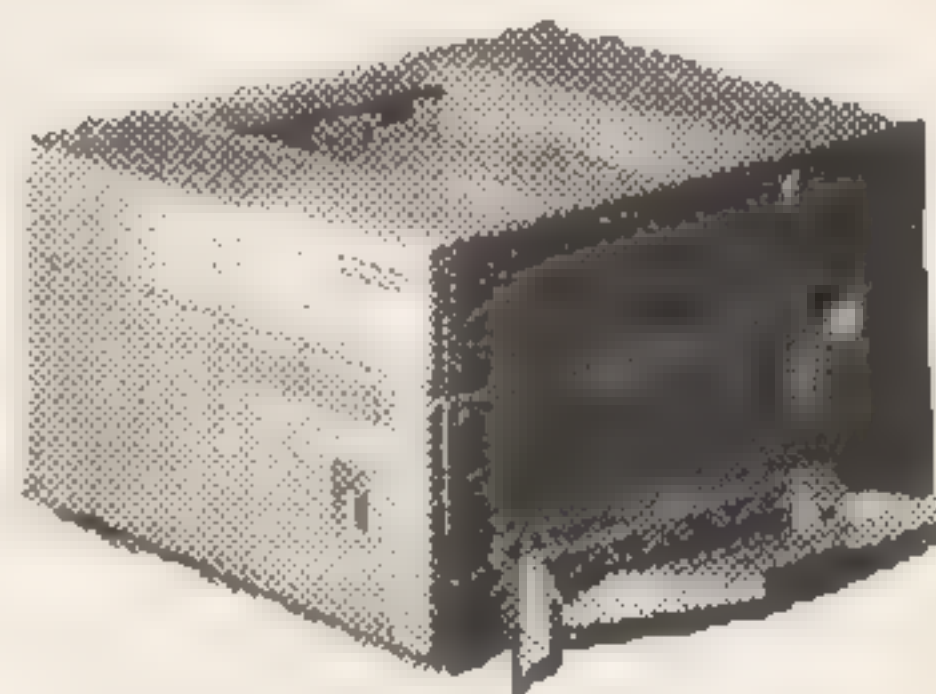
CORPORATE  
EDUCATION &  
TRADE ENQUIRIES  
WELCOME.

THE ORIGINAL 14 ASHBY RD  
**MEDIA** COALVILLE  
LEICESTER  
LE6 2LA  
COMPANY LTD  
TEL: (0530) 81359  
(8 LINES)

# UK HOME COMPUTERS

## CITIZEN LASER PRINTER SCOOP

Don't miss this superb once-only offer. The fabulous Citizen Overture 110+ Laser Printer. Look at these features:- 10 pages per minute, Epson fx-85, IBM Proprinter, & Diablo Compatible. 300X300 dots per inch, 512k on-board memory, Dual interface, i.e. Centronics & RS232, Output in either landscape or portrait, face-up or face-down, approx. size 19" X 17" X 12.5". The average selling price for this printer is currently around £1000.00p plus VAT. Look at our price and get your order in now to avoid being disappointed. Stocks are very limited at this price.



# OUR PRICE £699.95p

Plus VAT & Carriage TOTAL £820.00p

12 Month on site  
warranty included



VISA/ACCESS orders welcome. Prices subject to change without notice. All transactions are subject to our standard conditions of sale, available upon request. Personal callers welcome by appointment.

VISA

UK HOME COMPUTERS  
82 Churchward Ave. Swindon,  
Wilts SN2 1NH (0793) 695034.





• smart cards the processor and accompanying units are contained in the small metallic square.

Industry sources estimate there are 250 million plastic cards in circulation in the UK, representing transactions amounting to over £3.5 billion – by far the largest market in Europe, nearly three times the number in France and Germany. So it's something of a surprise to learn that Britain has the lowest uptake of smart card technology in Europe.

A true smart card is a durable credit-card sized slice of plastic containing an embedded 8-bit microcontroller comprising of a central processing unit and some RAM, ROM and EPROM storage. Whereas your everyday banker's card only holds 1K of data on a magnetic stripe, many smarts can now hold up to 128K, with memory protected by either physical fuses or logical safeguards in the form of dedicated bits. In addition, some feature miniature keyboards, LCDs and battery.

Communication is largely through 16 or more edge contacts that interface to a smart card reader sitting between the card and a PC, and using standard serial communications. Some more sophisticated smarts, just coming on the market, use radio frequency or inductive surfaces to transmit and receive data. The storage media, in either EPROM or EEPROM form, is structured in files allocated, retrieved and protected by the on-board operating system contained in ROM. By and large, smarts are used in areas of sensitive or secure data, so protection is afforded by either passwords or cryptographic keys.

One of the main differences between a smart and a computer is that its CPU is unique, with a serial number that can be personalised for a specific person or function. So, although a name can be printed on the

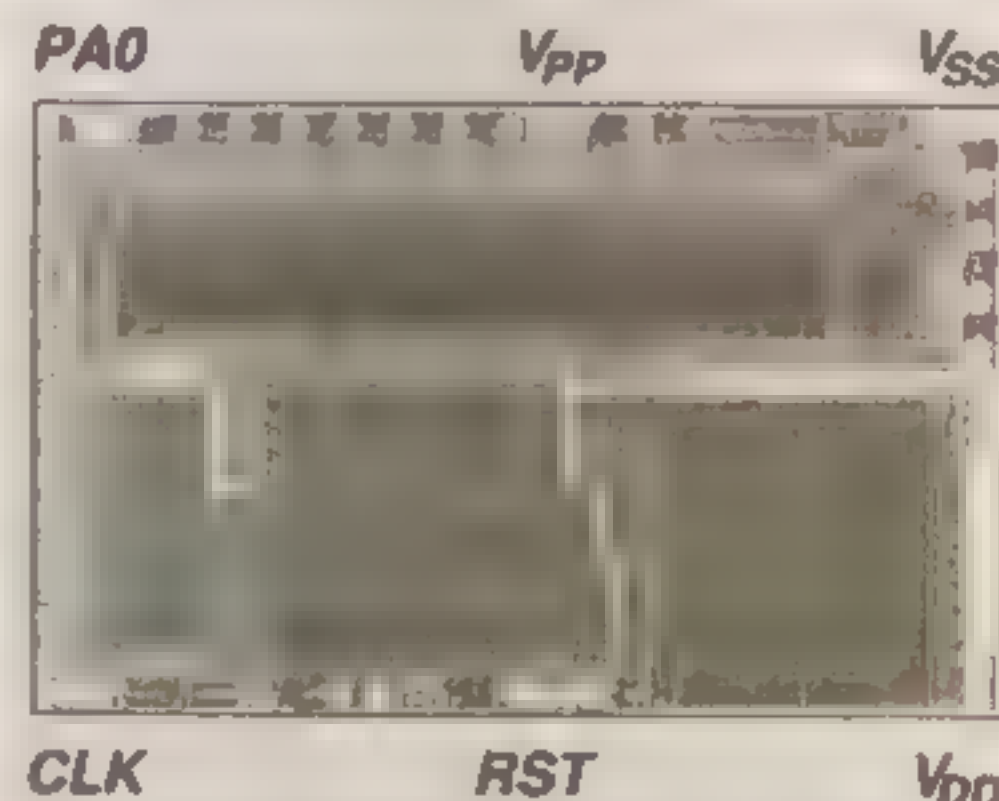
# SMART MOVES

This year will see the number of smart cards in daily use in Europe tip the 20 million mark. By 1995 this figure will more than treble. Andy Storer finds out why...

card, or a picture or signature added or even digitised, security remains assured through the encoding.

With developments like Canon's re-writeable optical card holding up to 4Mb, it seems clear that, as we enter the Nineties, the dream of credit-card sized data storage will become a reality. In the meantime though, it is the security benefits offered by smart cards that are attracting most corporate interest.

Although the notion of an 'intelligent card' may be something of a misnomer, the range and type of data that can be stored leaves the smart card as a technology that is only just beginning to take off. Residents in Milton Keynes already use smarts as charge cards for transport and leisure facilities, while in Jersey their use goes beyond this to include medical records and a host of different retail outlets. It's not too difficult to envisage non-contact smarts being used in some future elec-



• The processor at the heart of a smart card – Motorola's MC6805 chip.

tronic tagging scheme similar to the recently scrapped venture to monitor football supporters.

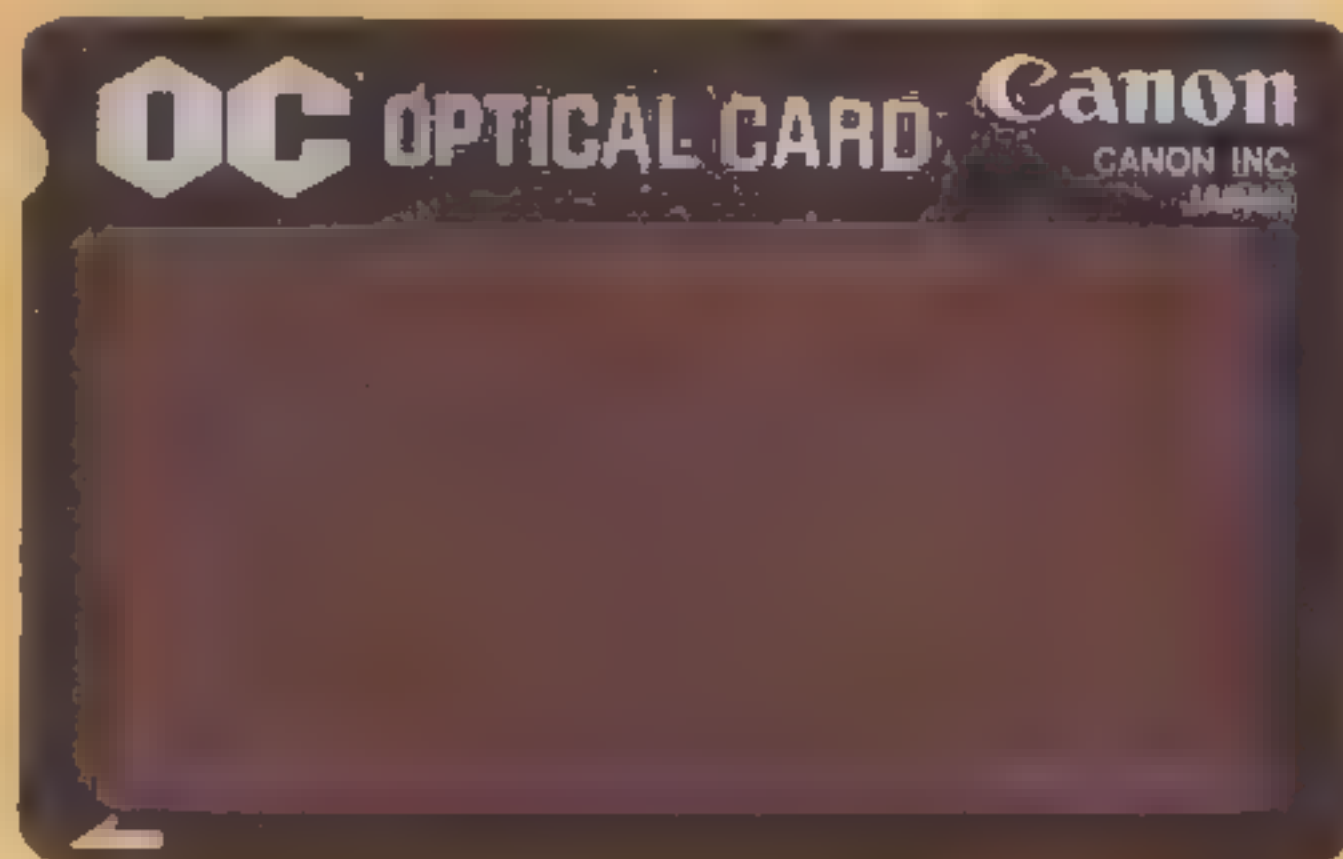
In that instance, it was the time taken to process data, rather than the perceived need to process it, that led to its demise. With radio-wave readers, the technology would enable such legislation to proceed. ■

## SUPER SMARTS

Austrian manufacturer ELIS has a smart that can be read and written to at a distance while in motion using radio communications. As it can be supplied in various shapes including credit cards, dog tags and buttons it's being pitched at ID cards.

Drexler Technology's LaserCard is an optical memory card capable of storing up to 4Mb of data suitable for write-once and read-only applications. It's completely non-erasable, highly durable and has the built-in facilities to store digital photographs, signatures, voice and finger prints and even X-ray pictures! Data is stored and read by laser and data can be output to video printers.

More exciting for the future of mass storage is Canon's new optical



• Canon's optical card system uses cards which store 2Mb of data and cost only £2.40.

card system which includes a £900 reader/writer that can access 2Mb laser cards costing only £2.40 each.

Although it won't be available until next year you can get further details on 01-773 3173.

## SMART USES

How convenient it would be to use just one card instead of several for all your everyday uses – withdrawing cash, making phone calls, paying for goods. That's the prevailing philosophy of smart card manufacturers. How inconvenient to lose just that single card though! In the meantime, these are the areas currently getting smart:

- Health care and social security
- High-security access
- Optical filing
- Electronic funds transfer
- Automatic fare collection
- Shop floor control systems
- Portable personal databases





• Don Bluth with just a few of his creations.

# DIGITAL DISNEY

With *Dragon's Lair* and *Space Ace*, Don Bluth can arguably claim to have delivered a new dimension in home computer entertainment. Andy Storer casts a critical eye over the future of 16-bit computerised cartoon action...

**R**emember *Dragon's Lair*? An arcade extravaganza running off laser that ate money like there was no tomorrow? Well, tomorrow's already here in the form of its sequel, *Space Ace*. But now Don Bluth's game is now due out on the ST after a recent debut on the Amiga, and while its gameplay may leave a lot to be desired, there's no doubt its graphics and sound push the 16-bit beauties to new horizons.

These two games, and to a lesser extent *Who Framed Roger Rabbit?*, point the way to a possible future for 16-bit entertainment. With more gameplay, could we see the emergence of a cartoon industry centred around the micro? It's not too difficult to imagine –

the only countervailing factor is the lack of cheap mass storage devices. Because high-quality graphics take up acres of disk space the genre is limited. It's hardly surprising gameplay is downgraded when interactivity would require dozens of disks. But with the emerging technology of CD-I – witness Titus's release of its *Titan* CD-I game announced in *Express* 68 – the storage capacities will be available. With the likes of Pixar, and Industrial Light and Magic expressing interest we could see simultaneous cinema/computer releases.

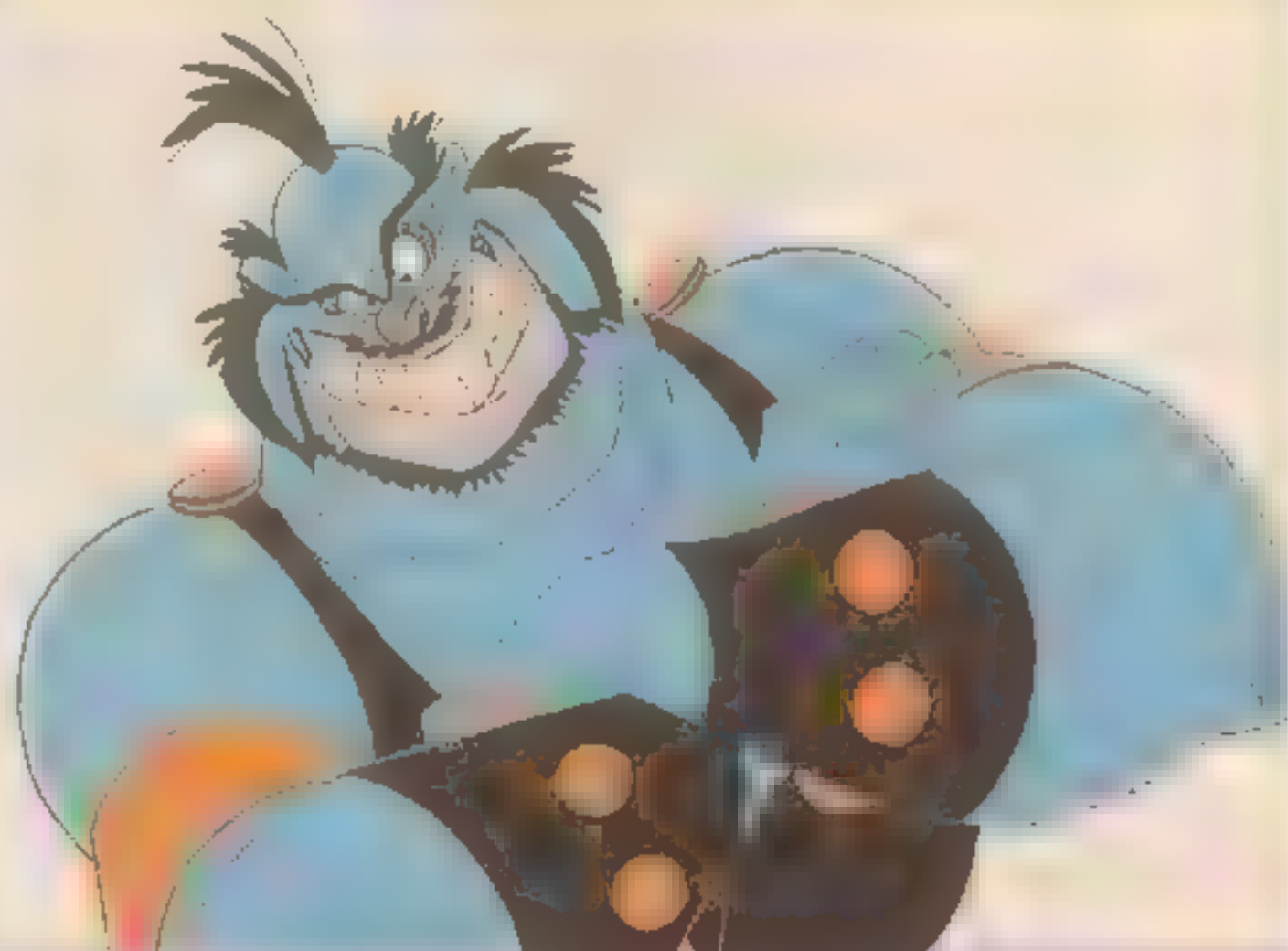
## BLUTH'S PAST

Disney-buff Bluth was lucky enough to take an apprentice job working on the master's *Sleeping*

*Beauty*. As assistant animator, he was responsible for 'tweening' – the process of drawing all the in-between frames for the key characters' actions. By 1978 he'd worked on *Robin Hood* and *Winnie the Pooh* and directed *The Rescuers*, *Pete's Dragon* and *The Fox and the Hounds*. However, artistic arguments with the Disney organisation, principally over what Bluth believed to be the company's diminishing creative standards, led to him quitting to form his own company.

Five years of experimentation followed, in which time he looked at ways of combining computer technology with traditional cartoon animation. And then in 1983 he teamed up with Magicom to produce the first interactive cartoon – *Dragon's Lair*.

## A LOOK AROUND THE GAME



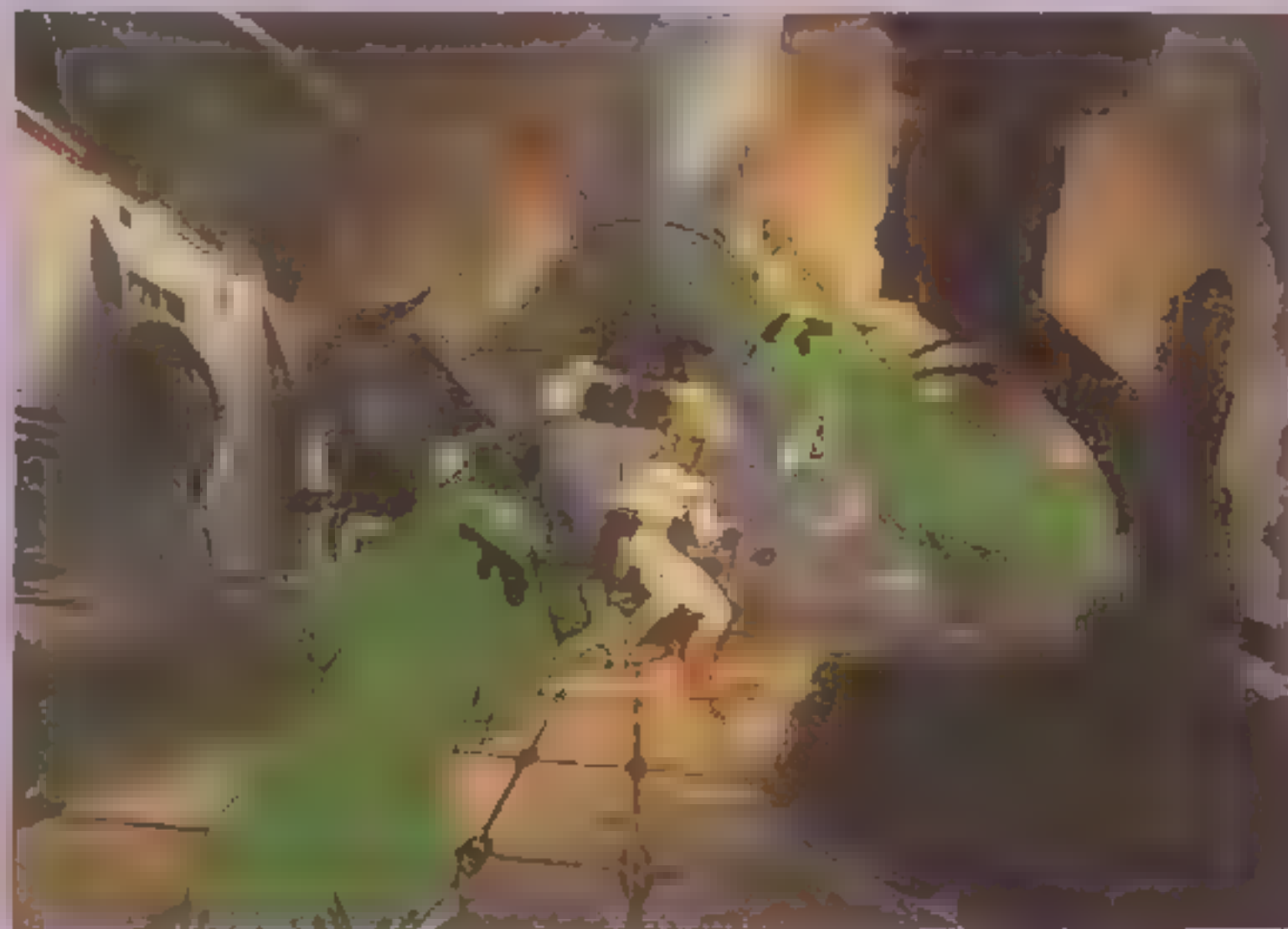
• The alien Borf greets you on the opening title screen.



• One false move and you're so much dead meat for the Cavern monsters.

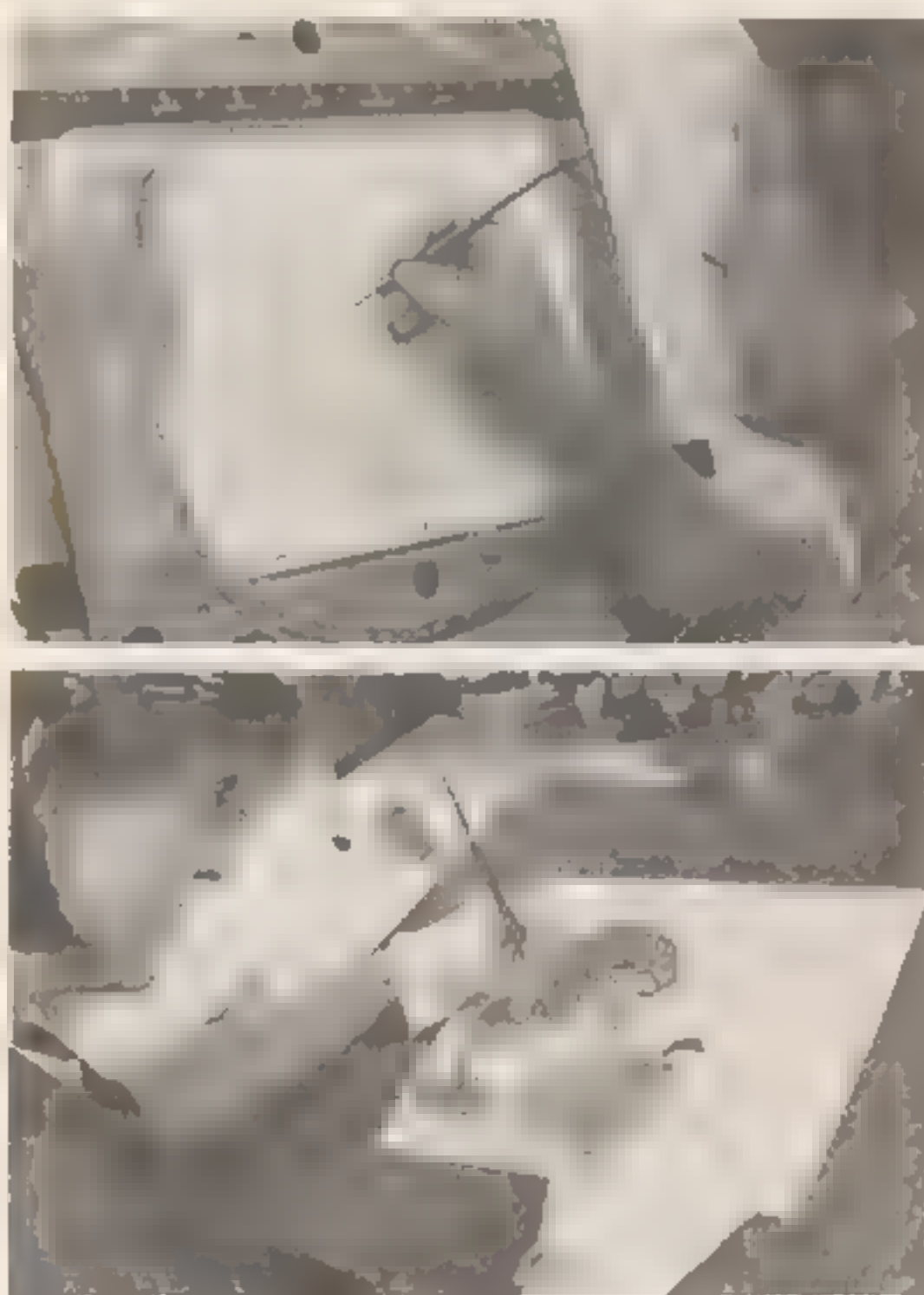


• You can leap out of the way in time for these two guard robots to shoot each other.



• When you first get to Borf's ship you have to take on these two guard dogs.





• The original artwork for *Space Ace* was hand-drawn and then cel painted before being filmed. The resulting animation was then digitised onto an Amiga using Digi-View and ported over to the other machines from there. In the process the 16 million colours of the original Laserdisc are reduced ■ 16.

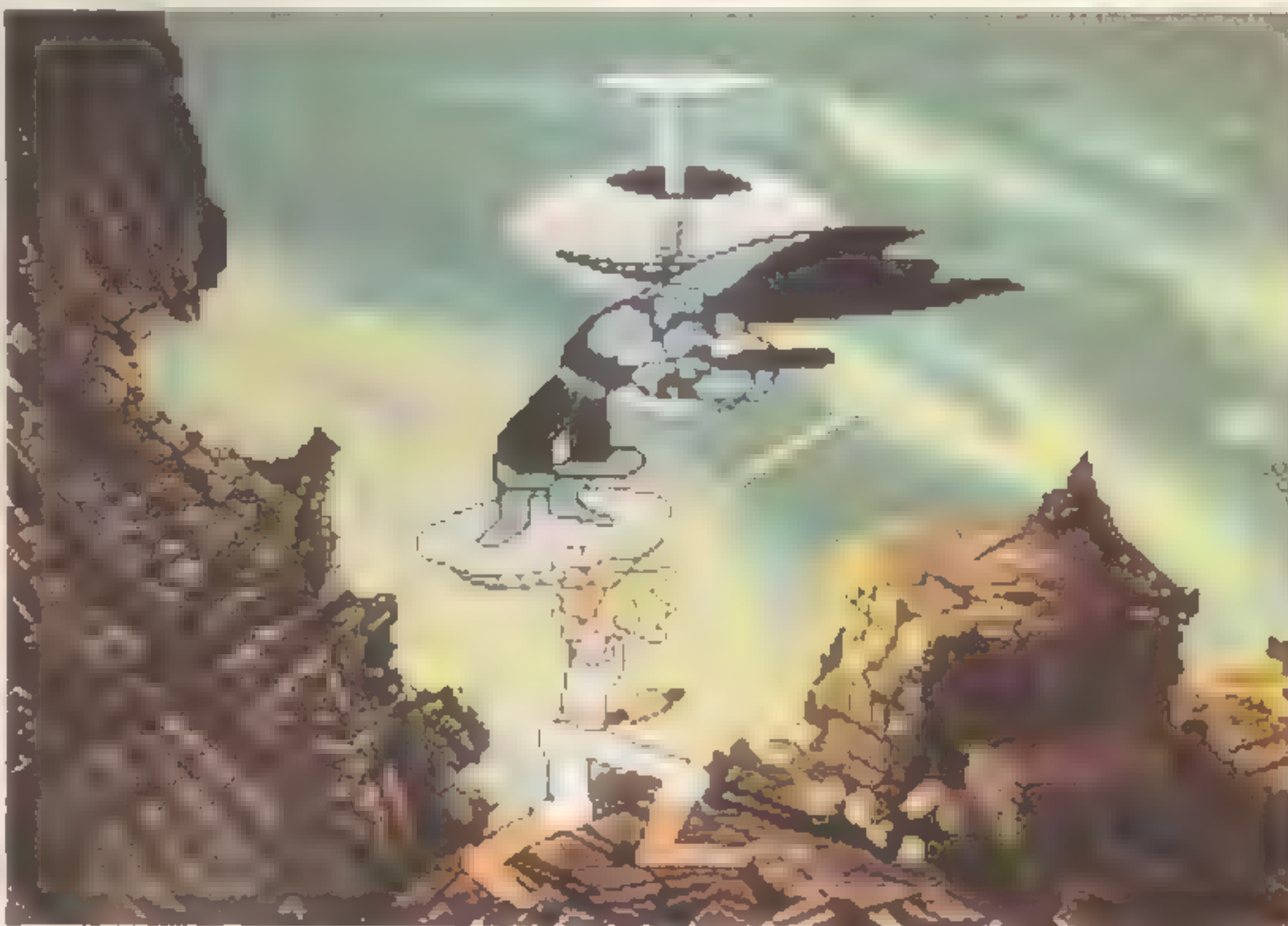
### CRITICISED

Although criticised for the implementation – the gameplay relied on lightning-fast responses – the Laserdisc arcade version became well-known enough to become a classic. A classic for all the wrong reasons though. The memory is more likely ■ revolve around who put the most 50ps in the slot trying to complete even the first screen, than what a lasting audio-visual experience it was. Nevertheless, 25 minutes of animation, filmed, videotaped and etched into the pits of a Laserdisc, became a game played in 25,000 arcades worldwide.

*Dragon's Lair* found its way to the Amiga over here last year in the form of six disks. And impressive stuff it was too, except for the fact that it was more or less unplayable. It seemed to be consigned ■ the demo shelves – to ■ only taken out to impress one's friends with the tremendous power of the Amiga. Some six months later it appeared on the ST and Magicom had proved you didn't necessarily need state of the art custom graphics chips to deliver leading-edge visuals. The argument remained though – was this a game to merely view or were you expected to gain from ■ gameplay experience? The truth is somewhere between the two – it remains the ultimate demo and, as a consequence, by far the most sought-after pirated game.



• The very first action sequence – above the arcade version, and below on the Amiga.



### UNRELENTING

*Space Ace* could have been different, but it remains the same. Only this time the action is half as fast again and unrelenting. What gameplay there ■ ■ smoother, but the degree ■ interaction between the player and cartoon character ■, again, minimal. So what's Don

Bluth playing at, bringing out games ■ £45 a throw that he himself admits a nimble player can complete in eight minutes?

For starters, he would argue that in interactive cartoons he's found the first new application for animation since 1949 saw the birth of *Crusader Rabbit*, the first character designed and animated specifically for television. Secondly, he's talking 'Total Resolution Graphics'. Canadian coder Readysoft has the contract to transfer all Bluth's work to personal computers. The full-screen animation and sound of the original laser show has been squeezed into 40 fast-action scenes using advanced compression techniques after being digitised onto the Amiga using Digi-View. Then all backgrounds and foregrounds are touched up by a team of a dozen artists. PC and ST versions are then ported over. In the process the 16.7 million colours of the Laserdisc become 16 colours on the 16-bits, but the results remain impressive.

Next on the cards for Readysoft is *Dragon's Lair II* for all 16-bit machines. Whether this will make it to the arcades remains to be seen – Nintendo has the rights to the game. ■

### PLAYING THE CARTOON

Now that lots of coins have been replaced by lots of notes, what does *Space Ace* offer for the gamer? Well, you take control of *Space Ace* himself in a battle against Borf, an alien tyrant who's decided to take over the Earth by turning adults into children. Only thing is, *Space Ace* is now child himself called Dexter, and he also has to rescue his sidekick, Kimberley. The action begins on a cliff-top overlooking Borf's ship,

where you must dodge laser blasts and continues in a similar vein past rocky canyons and stomping robots to Borf's ship itself. Here you're up against guard robots, guard dogs and auto-defence systems. Finally you have to take on Borf in hand-to-hand combat with laser staffs and rescue Kimberley. It's all extremely fast action stuff but unfortunately ■ your input ■ the proceedings consists of is moving your joystick at

the appropriate time. Which means incessantly. After a while, as with all shoot-'em-ups irrespective of their quality, you know all the timings and it's plain sailing. With *Space Ace* there are probably a couple of manoeuvres per level to keep you on their toes, and the inclusion of a Save Game feature means that it's made even easier to complete. But in the meantime, just check out those graphics...



# SAM Across the Nation

The exciting new SAM Coupé computer is at a shop near you.

*Check it out now!*



Do you have a favourite computer store ?

- If so which is it....

Name \_\_\_\_\_ Town \_\_\_\_\_

Please send me details of my local SAM Coupé stockists:

Name :- \_\_\_\_\_

Address :- \_\_\_\_\_

N.C.E.

MILES GORDON TECHNOLOGY Plc  
Lakeside  
Phoenix Way,  
Swansea SA7 9EH



MILES GORDON TECHNOLOGY Plc

Lakeside, Phoenix Way  
Swansea SA7 9EH  
Tel: 0792 791100  
Fax: 0792 791175  
Telex: 48297 JOYTEL G



# TECH TIPS



## Feeding time

The problems discussed recently in Tech Tips about Spectrums and their random insertion of line feeds when printing documents can be cured by me.

The problem lies with the Spectrum's interrupts which occur every 20ms and insert intermittent random line feeds and occasional double characters. I have written a routine to combat this and can now supply it to other sufferers on 3-inch disk for the princely sum of £5.

Neil Morgan, 85 Crescent Road, Bolton, Lancashire.

## Cyber man

I intend to use the *Cyber 3D* animation series and I require a two-megabyte Atari ST to run it.

One of the advertisers in *Express* is offering this at £450, which is just superb! Is this price so low because the STE is so easily upgraded and the memory chips are cheap, or are there inferior memory

upgrades for the STE which should be avoided?

■ Abraham, West Jesmond, Newcastle upon Tyne.

Don't worry about inferior upgrades and the like! Large memory STEs are priced thus because they're easy to upgrade using cheap and widely available SIMMs (Single In-line Memory Modules). Rush out and buy the STE at £450 - you won't be disappointed!

## Kit capers

Some time ago I was fitting a second drive to my Amstrad PC1512 and decided to fit the Citizen 525MFR kit. The instructions supplied with the kit were a little cryptic but by means of trial and error I discovered the correct procedure for fitting the drive which might be of help to other readers.

First, the original drive has to be configured to enable it to operate correctly in a two drive environment. This is

Does your PC keep packing up? Is your Amiga less than friendly? Would your ST try the patience of a saint? Write to Uncle Tech Tip, he'll see you right. Send your sorry stories to Uncle TT, 30 Monmouth Street, Bath BA1 2AP. There's a prize for the most pitiful tale

done by removing it from the casing and shielding, looking at the rear of the drive where there will be a row of points marked from DS1 to 4. Behind these there is another set of points marked VA and DA. Remove the jumper from the VA terminals and place it on the DA terminals, re-assemble the drive and place it back in the case.

Next, set the drive selection switch on the Citizen drive one notch back (towards the front of the drive) install it into the casing, connect to the existing interfaces and bingo!

Either drive can be configured to be drive A by a reversal of the above dip switch settings. It only remains to go into the CONFIG.SYS via the *Edlin* editor under MS-DOS and add the line `DRIVEPARM=/D:N` where N is the device number (1, 2 or 3). Hope this helps some poor reader.

T A O'Connor, Port Glasgow, Inverclyde.

## Deep blue C

I have just got hold of *Sozobon C*, but I am experiencing problems working out how to use it. What would greatly be appreciated would be a step-by-step guide to how to compile, assemble and link a C source program, preferably with an example of a GEM program.

Ian Ferguson, Carlisle, Cumbria.

The problem with using public domain programs, alas! Worry not however, as *Express*' sister magazine *ST Format* is currently producing exactly what you require - a complete guide to programming using the C language with examples based upon *Sozobon C* and GEM. *ST Format* costs £2.95 with a disk and is available from good newsagents everywhere.

## PD quick!

I have been building up a nice little collection of public domain disks from the covers of the monthlies ready for when I buy an ST. However, what can I do now? I am doubtful whether these disks will work on the STE. But if I do get the STE, will the monthlies soon be publishing disks that won't work on a good old plain ST?

By all accounts the STE is just a big spanner in the works, and while no-one can predict the outcome, I wonder whether it might be good idea to put off the purchase until the matter has been resolved. I have in mind using my STFM1040 for music sequencing software. Earlier I was keen to go for an ▶

## Multi-lingual Amiga

Here are a few points regarding Chris Winner's letter in *Express* (He wondered whether buying an Amiga in Germany was a good idea - Uncle TT).

Any software bought in Germany is likely to have its instructions in German and may well not be covered by a guarantee back here in the UK. There are however, quite a number of software titles that have multi-lingual instructions, it's just a case of shopping around. As for buying an Amiga out there, work out the exchange rates and if it's a bargain then go for it. The machine will not talk to you in German except when you insert the Workbench, Extras or The Very First disk. Fortunately, all of these are available here in the UK with manuals in English from various sources (for example from Wizard Software). Also you must configure the keyboard to GB so that it understands English.

You must be aware, however, that a German keyboard has its Y and Z changed about. Bear in mind that it will cost an extra £20 to convert to an English language system, but if the offer is cheaper then it could be worth it. Sorry I rambled on a bit, but it might be useful to anyone considering this method of obtaining a cheap Amiga.

And now to some questions. Is there any way I can find out about modems and bulletin boards before I part with my money? What can I read? My son has a Commodore 64. Can one modem be used both for this and my Amiga? Where can I find out about the Amiga in amateur radio? Is there any way I can use the Commodore 64 as a printer buffer so that I can get on with other things while my MPS1230 is squeaking away?

Andy Beveridge, Fleet, Hants.

For the German Amiga tips - well done! There is a very

simple way to find out all about modems, bulletin boards, general ham radio principles and all manner of other communications subjects, buy a copy of the *Hacker's Handbook* by Hugo Cornwall. Originally published in 1983, the book caused a storm of protest from the powers-that-be for its frank narrative detailing hacking methods. After various bits of litigation, the book was revised and is currently in its fourth impression. Now without many of the phone-phreaking and hacking snippets, but still bulging with juicy sections detailing all aspects of comms, the *Hacker's Handbook* is the best read around for anyone about to embark on a serious of nights before a glowing computer screen and trilling modem. The *Hacker's Handbook* (ISBN 0 7126 9711 X) by Hugo Cornwall is published by Century Hutchinson and is priced at a reasonable £6.95.

You can use the same modem with the Amiga and the C64 as long as you have an RS232 interface for the C64. The C64's hybrid serial ports don't allow the connection of third-party peripherals, so you must attach an interface. One of the better suppliers of all things C64ish is Meadmore LTD. Commodore 64 owners everywhere sing the company's praises as it supplies a wide range of electronic bits and pieces for the C64. Contact Meadmore on 051 521 2202.

The C64 as a printer buffer? Not without serious programming. The task would require a patch to intercept data being ported over from the Amiga, store it in RAM and write it out to the printer port - not an easy task! However, the Techippers are an inventive lot and someone, somewhere may have already solved this particular little printing problem. If you are that Techipping programming genius then call me. Fame and fortune awaits...







Amiga, but most indicators steer me to an ST for the widest choice of music sequencers.

*Richard Watkins, Misterley, Shropshire.*

An unfortunate situation. I can say with authority that most of your disks won't work if you buy an STE. Current PD library compatibility estimates suggest well over 50 per cent of public domain disks won't run with the STE. Monthly magazines are now testing prospective cover disk programs for compatibility with both machines.

The STE may be the newest machine from Atari, but there are still many thousands of earlier STs out in the field which must be catered for. Be aware, however, that the STE will become the standard ST machine and the computer to buy if you're looking for an Atari. Soon the compatibility problems will be a thing of the past and everyone will be writing to support the new machine.

The ST with its built-in MIDI port is the first choice for musicians who want to experiment with sequencing, and there are lots of professional-quality packages available to get the most from these ports. Try *Sequencer One*, a superb sequencing package from Gajit's Music Software (061-434 2768) priced at £79, or the excellent *Prodigy* from The Digital Muse (01-586 3445) priced at £129.95.

## Which computer?

I wish to upgrade from present C64 to either an Atari 1040STE or a 1Mb Amiga. I have done quite a bit of Commodore 64 programming - some of which is quite lengthy - and wish to remain with a type of BASIC as near as possible to the one I'm used to.

I'm sure that I read in *Express* that Atari BASIC is not very good, so which of the above computers do you think I should get? And which version of BASIC would be the best for me - requiring the least changing from the programs that I've already written?

I have no interest in games and the programs that I write are mainly for my own enjoyment as I am retired and writing programs provides an absorbing pastime.

Also could you recommend a suitable VGA monitor to use?

*John Rosbottom, Wigan, Lancashire.*

The ST's BASIC is widely regarded as being a slow and cumbersome implementation of the language which should be replaced as quickly as possible by anyone purchasing the machine. That said, and bearing in mind that your main use is for BASIC programming and that you already have Commodore equipment, I would advise you to stay with CBM and buy an Amiga. The Amiga is an excellent machine with a quality BASIC which although not the best on the market is certainly better than the Atari offering.

## HELP! Patching up a PCW with some extras on the cheap

I own a PCW8256 which suits me just fine, but I would like two things. Firstly more memory and secondly, a disk drive using cheaper disks. Now I know my heart's desire may be purchased with wads of money but it occurs to me that perhaps I might be able to get the requisite chips cheaper from another source, but where? Please let me know.

And I notice that 3.5-inch drives are cheaper when not advertised in dedicated PCW magazines. I read that CP/M can run these drives without problems, but can I get the connectors to attach it to my PCW? I have full instructions for these projects from another magazine, but no sources.

*Jonathan Guyver, Penryn, Cornwall*

Your heart is about to receive its desires! It is perfectly possible to buy memory chips, drives and all other bit and pieces computerish from third-party sources, usually making a vast saving in the process.

Memory chips? Call Maplins

VGA is a display standard for the IBM-PC and its many compatibles and has nothing to do with either the Atari ST or the Commodore Amiga. For a very good monitor you could do worse than examine Commodore's own 1802 colour display. I know many Atari addicts who swear by the Commodore display. Available from suppliers of the Amiga, the 1802 costs around £200 discounted.

## Library litigation?

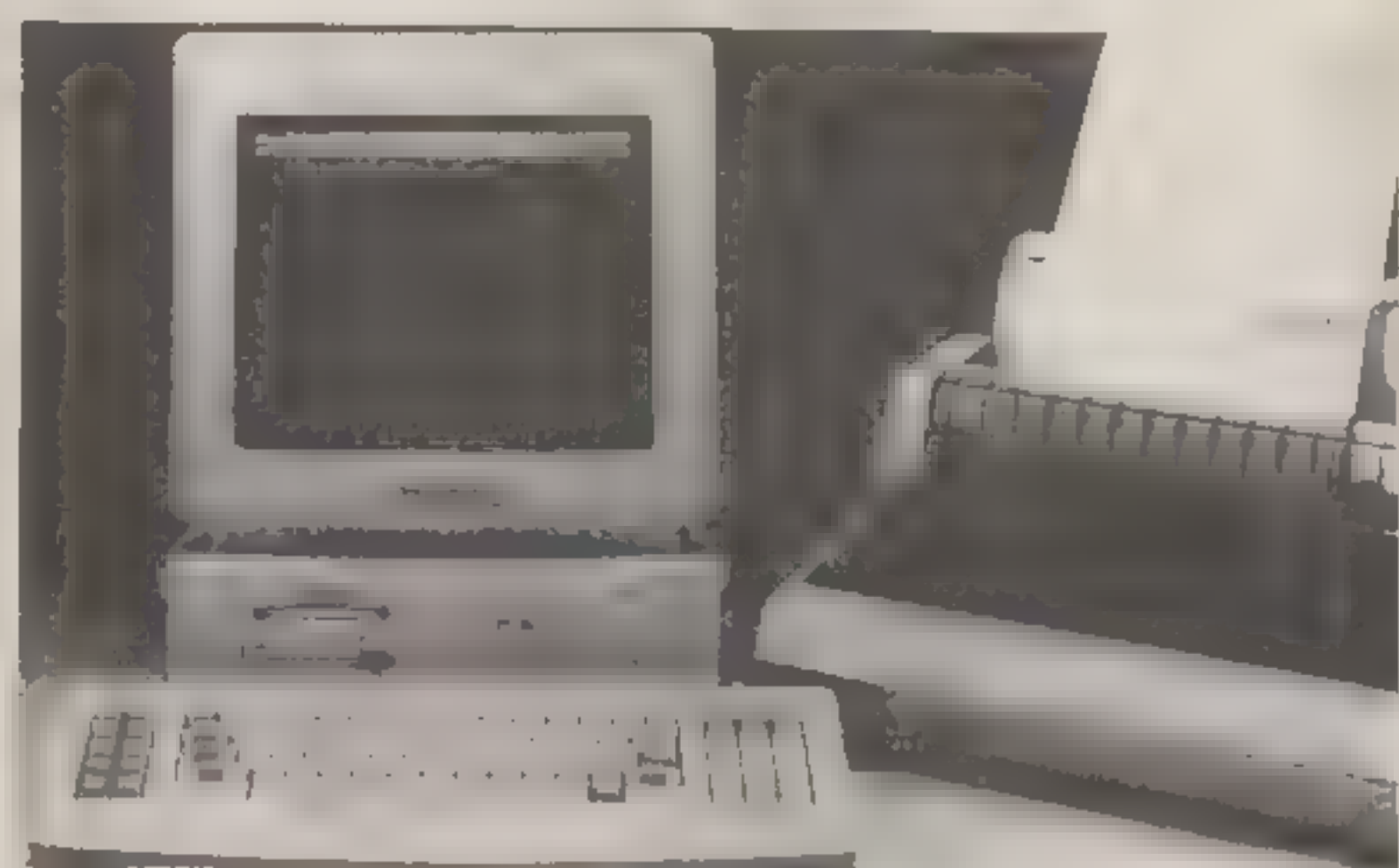
My friend and I are considering setting up a public domain service to provide cheap public domain software at only £2 per disk. While looking through a PD catalogue, I noticed it said that you could copy and distribute the disks but you couldn't sell them. Would you please explain this to me as I don't really want to break any laws.

*Gareth Hall, Westminster Park, Chester.*

Public domain software is that which the author has said can be copied and distributed entirely free - that is without having to pay him/her anything for having the program. There are several clauses associated with all this copying and distributing however, the first of which states that you must not make a profit by selling the program.

If the author has declined to accept money for their work, it's only fair that you don't either, merely for copying and passing it on. You must not change the program in any way and must include any information and data files associated with the software. This is to stop anyone changing just a small part of the program and claiming sole authorship.

Right, so how does anyone make a



• Patch in those memory chips!

Electronics on 01-748 0926. This company is a respected supplier of all kinds of electronic components and stocks a vast quantity of memory chips (256K DRAMs are currently under £1).

As for a disk drive, Evesham Micros (0386 765500) sell several 3.5-inch drives. Although not intended for use with your PCW (the cheapest

currently is that for the Atari ST), these are standard drives that will connect to any micro able to support a drive of this format. The device comes with a separate power supply and a standard 34-way edge IDC connector. If the project instructions you have require a different connector Maplin is again the supplier to contact.

living from running a PD library? Well, although you're not allowed to make a profit from the software, you can make a small profit from the sale of the disk upon which the software is stored, and for the electricity and time and effort invested by you during the copying process, and this is indeed how many PD libraries form the sole income of their librarians.

There's also one other type of software which falls somewhere between the PD ideal and commercial offerings - shareware. Shareware is software which can be copied and distributed as will, but if the recipients decide that they like the programs and will make extensive use of them, then they must make a donation to the author.

Sometimes the amount of this donation is a fixed sum decided by the author, sometimes it's just how much the recipient thinks the program is worth. Although shareware is exceptionally popular in the United States among authors and users alike, here in the UK the idea has not yet fully caught on. Users are reluctant to part with their cash. This has led to many shareware programs being re-released here as commercial software.

If you want to set up a public domain library and sell the disks at £2 each, go ahead! You'll be one of the cheapest libraries doing so, and will probably enjoy a large amount of custom. It's perfectly reasonable to send for other libraries' disks, copy them and include them in your own library. Many librarians may moan at this because they've invested much time in garnering their own collections, but as they don't actually own the software, you're at liberty to copy their disks at will. Treat the

software with respect, abide by the unwritten rules of the PD concept and have a good time.

## Trusty Tandy

After recently blowing the dust off my trusty Tandy DMP105 printer I have got it to work again. It used to be hooked up to my TRS80 model 1 computer, but now I have an Atari 520STFM and I was wondering if it would be possible to connect the DMP105 to my ST? If so, would I be able to use it to do screen dumps and to output from DTP packages?

It's only a 7-pin device so I'm a little worried that it won't work.

*James Roskell, Blackpool, Lancashire.*

You can indeed connect your DMP105 printer to the Atari 520STFM but you'll probably have to make up a printer driver in order to get it to produce bit-image graphics dumps from desktop publishing packages and screen dumping programs. It will work perfectly well as is however, with word processors and other software in straight ASCII mode. Most of the popular packages requiring printed output, such as *1st Word*, enable you to create a printer driver to suit your particular model.

If the prospect of digging out obscure printer codes appalls you, have a look through some public domain catalogues. Many libraries stock a range of printer drivers to suit forgotten printers. The Tandy device was a popular printer a few years ago, so someone may have put together a suitable driver. One of the better libraries is that run by Mike Goodman. Contact Goodman PDL on 0782 335650 for a copy of their latest catalogue.



**SUBSCRIPTIONS**

# EXPRESS DELIVERY

**SUBSCRIBE NOW to Britain's biggest and best  
computer weekly!**

**AND GET 54 ISSUES FOR £34.95**



Fill in the form below including your credit card number, or send it with a cheque, made out to Future Publishing to:

Express Subscriptions, The Old Barn, Somerton, Somerset TA11 7PY

NAME .....

ADDRESS .....

TELEPHONE NUMBER .....

ACCESS/VISA NUMBER .....



## ■ Magnum Opus

I am writing to inform all Opus Discovery owners that there are cheaper ways of getting these repaired than sending them back to Opus.

I help to run a user group for this disk drive, and have had two people ring me up to tell me they have been told it will cost £100 to repair the device. This is ridiculous, as VSE Technical Services will repair the drive for £21.90.

One of our new members who actually sent his unit to Opus was sent a letter telling him he had three choices: to send £115 to have it repaired, to send £15 to have it returned or that they would dispose of it for him. This is not the treatment I would expect from a manufacturer the size of Opus.

The address of the Spectrum Discovery Club is SDC, 57 St Saviours Road, West Croydon, Surrey CR0 2XE.

B D Mumford, West Croydon, Surrey

Good grief! Is there anything going that doesn't have a club for users?

## ■ When I'm 64

I am fed up with the attitude taken towards 8-bit micros and, in particular, the Commodore 64 (of which I am an owner). You are treating the 64 as if it is totally dead. It used to be worth half a page (if not a full page) in the Your Format section, and now it is lucky to get a quarter.

The Archimedes gets more than that, and has much less than half the user base of the 64. I am not saying that it deserves a full page purely because I have one but because more people have them than have, as an example, Amstrad CPCs (page 15 same issue).

There is much more life in the old dog yet, even though at eight years old it is positively ancient technology compared with RISC, CD-ROM (but even in form of that is available on the 64), 80486s, etc.

Please, please give the 64 more coverage or I, and many other 64 owners in Carlisle with whom I am acquainted, will stop buying Express.

D Robinson, Brampton, Cumbria

I am prepared to review the amount of coverage given to the machine. If there is enough interest among readers, and if coverage would not simply double the number of games covered, it could be an idea. All thoughts welcome.

## ■ An engineer told me

You were a little harsh with Philip Atkinson (*The man who wanted to convert his TV to a monitor* - Ed) in the Tech Tips column. Encouraging technophobia solves no problems, and there is not a 'qualified' TV engineer who was not a beginner once.

Everyone involved with computers should know about the dangers of the EHT circuits. There is a line-output valve



or transistor connected to a line-output transformer ('loppity'), which feeds via a stick-rectifier to the body of the cathode-ray tube. You can see the thick wire - often coloured red - going to a plug on the tube body. All these parts are very dangerous indeed.

In a black-and-white system the voltage is usually about 7,000. Colour systems may have as much as 25,000 volts and may use a voltage multiplier in place of the stick-rectifier. The danger is that you do not need to touch these parts to be killed. The voltage may jump on you if you approach to nearer than four inches.

The simple answer is to switch off. Leave the set for at least half an hour. The stick-rectifier is a one-way device, so the electricity can get into the tube but may take a long time to escape. I once had a shock off a disconnected tube five months after it was removed from a set and put on the shelf!

Silly 'engineers' sometimes play around, drawing long sparks from the EHT. This is crazy - it makes the loppity and output transistor overheat, causing premature failure.

If you see a thick coating of dust and grease on the EHT circuits, you will know that the set needs a clean-up. If you have family around you, put the mains plug in your pocket so that nobody can plug it in accidentally and kill you.

Clean the EHT cable, stick-rectifier and loppity with tissues moistened in isopropyl alcohol (obtainable from a chemist). If there is a grey electrically-conductive paint on the outside of the tube, do not treat this area. Use a dry rubber glove to avoid shocks.

After the alcohol has evaporated, you can try the set. I recently saved a TV set that was on its last legs. The picture was jumping and the circuitry was buzzing and overheating - all because of a build-up of grime.

Further, if you are upgrading the memory of a PCW 8256 you will need to be able to identify the EHT circuits so as not to get hurt.

# EXPRESS MAIL

Britain's liveliest computing forum - packed with comment, controversy and conflict. Write and tell us what you think! Reach us at: **Express Mail, 30 Monmouth Street, Bath BA1 2AP.** Sorry, no personal replies. This week's replies written by Martyn Lester.

You can also tell if grime is accumulating. A clean-up every three years might be advisable - but not more frequently.

Philip Atkinson was right when he suggested converting a TV into a monitor - this has been done. In the early Eighties there was such a fashion for this that most electronics magazines published their methods. Manufacturers noticed the trend, and most of them brought out a range of combined TV-monitors.

Not all sets are suitable. Only those with an isolating transformer can be converted economically. These often have an earphone socket and a 12V car-battery input. You need the full type-number of the set. Sony is a maker, Trinitron is a kind of tube. The type-number is usually a small panel on the back of the set.

The full circuit diagram for virtually all sets is obtainable from Newnes Radio and TV Servicing. Holborn library in London has this.

Wireless World (now Electronics World and Wireless World), Practical Television (now Television Magazine) and the defunct Electronics and Computer all had articles on conversions. However, I do not think they would take too kindly to enquiries of this kind. Best look for back-numbers in libraries.

The makers of conversion kits may no longer make them. These kits involved a small panel to be fitted, but the fashion has passed.

The Trinitron tube is a low-resolution device designed for viewing at a distance. Computer monitors are designed for close viewing. Amstrad took a lot of stick when it fitted the cheapest tubes in its PC 1512 colour computers. Even if converted, the Sony Trinitron would only give quality approaching the 1512.

The BBC Model B has a built-in colour RF modulator which gives just enough blurring to avoid the moiré ➤

## ■ Unfortunately, some have a washer loose

Having read about the problems encountered by Marcus Turvey in Express 68, I felt that I must write in to explain my experience.

I had been using my new Commodore Amiga for several weeks when I too realised that I had made a mistake - what I really needed was a washing machine.

Being fairly accomplished in the use of a soldering iron, I began to make the necessary alterations to the computer. I attached two hosepipes to the joystick ports and cut a hole in the keyboard casing to put the washing in.

My Amiga is now rendered useless, and my guarantee is invalid. So I too am left with nothing (except third degree burns to my chest, hand and face).

Jon Hawkins, Monmouth, Gwent

I hope this isn't going to turn into a 'my Amiga is better than your fridge' debate. Readers may feel there is a



• Washing machine or computer?

startling resemblance between this writer and the author of the other letter on this page. I wonder if they are in any way related?



fringes that would appear. Conclusion – honestly, why bother? Why run around seeking diagrams and parts, then risk your life and end up with a second-rate monitor? You may even spoil a nice telly.

If you must have a monitor, best look for a second-hand Microvitec monitor in the adverts in *Express*. It will probably be the best and cheapest option.

Charles Wehner, Blaenau Ffestiniog, Gwynedd

Thanks for the advice. I hope that careful readers are able to extend the life of their equipment by following it.

I must leap to Uncle Techtip's defence, because I know that he feels he is under a moral obligation not to set people off on a job which he considers, from his assessment of their letter, that they would bungle. This applies particularly if some risk to personal safety would be involved.

It is unfortunate if his response to that particular letter has come across as technophobic. I think he would be one of the last people on the planet that might be accused of technophobia, and the bulk of his pages each week are as clear an indication as one might wish that we would encourage people to make the most of their technology.

It may seem rather paternalistic of us, but we do tend to draw a line between people who say 'I know I need to do A, B and C, but can you tell me if this is an occasion where pin 1 should be connected to pin 4 or to pin 6?' and letting loose people who give no indication that they could wire up a three-pin plug on a job that requires some degree of caution.

We are not quite as cruel as you may imagine, because we took the liberty of inventing the name 'Philip Atkinson' to protect the real author from the jibes of his peers.

That people who try thoroughly stupid things do exist was amply illustrated by the letter a couple of weeks later from Marcus Turvey ('an electron-

ics technician by trade') who trashed his computer by attempting to fit totally incompatible custom chips. And speaking of him...

## Competition chaos

Late one Wednesday night, with rain lashing against the windows, an ST owner was going through his back issues of *New Computer Express* when, to his horror, he discovered a competition that he hadn't entered (*Express* 55).

As he browsed through the questions, thinking of how stupid he was not to have entered, he came across question 9: 'What is the charge of an electron?' Answers available:

- A. £15 an hour
- B. Gross indecency
- C. Negative

The ST owner in question thought to himself: 'None of those are right'. He continued to think: 'The charge of an electron can be negative or positive!' When he got to school he asked his so-called intelligent friends if this was true.

(He then rang up our Features Editor, said that we were a bunch of derek-heads for getting the answer wrong and asked for a prize for pointing this out, didn't he? – Ed)

All you readers out there may be wondering why I referred to them as so-called intelligent friends, this is because looking through a chemistry book while writing this letter the ST owner has discovered that he has made a large mistake and that the electron is, in fact, negatively charged.

I guess there's not going to be a prize for being so stupid as to not enter an *Express* competition and for doubting the word of such a nice magazine?

Brett Wilson, Epsom, Surrey

Too right there isn't. Doubtless you and your pals were thinking of an electrode, which can either be positive (an anode) or negative (a cathode).

While we are on the subject of that

competition, apologies are due to a number of readers who have not yet received their prizes (letters too numerous to print; red faces all round). Inheriting this has not been one of the fun parts of taking over the *Express* Editor's chair.

I am assured that by the time this issue goes to press all CRC virus killers will have gone out; adequate packaging has now arrived for the joysticks and cassette racks, which have been going into the post over the last few days; and Electronic Arts prizes have been sorted during this week and should be in the post within days.

Thanks to prize-winning readers for their patience, and rest assured that you will receive your goodies.

## Head case

I am writing to express my deep disappointment in your magazine due to your answer to my earlier letter which was written in regards the Psion Organiser.

I must tell you (so that you can right the wrongs) that my name is Derek Head, not Dick Head as you suggested in *Express* 69.

I also have a question (now that I have sold my Psion): what is the infinite credits cheat for the NCube laptop version of *Elite*?

Derek Head

It did seem a good guess as to what the D stood for, but I stand corrected. Send us your NCube and we will check the problem out for you.

## Stars on Tuesday

This being my first ever letter to a magazine I am pleased that it is in praise of a mail order company called Mediaware.

The story goes: Friday afternoon/evening – the time 5:05pm. Make telephone call to Mediaware; ask if they carry the Star LC10 printer in stock. Yes, they do have them in stock. Tell them I will phone them back. The time is now 5:15pm. I decide that I will order it.

It is the same person I spoke to earlier, the reason for this was explained. She and her colleague were the only ones there – everyone else had gone home. She was apologetic that my order could not be processed before Monday – but I would certainly get it Tuesday afternoon.

Well, you may say that you've heard that one before; so did I. But, arriving home Tuesday evening, I found that it was there and had arrived at 2:30pm approx.

I was well and truly over the moon, and if ever I want anything else they will get the order not only for their service but the way I was treated over the phone was a pleasant and enjoyable experience.

Mel Mayers, Macclesfield, Cheshire

I think readers must have given up moaning for Lent.

# NEXT WEEK

**MAC ATTACK**  
Are the Macintosh machines worth buying?

**CPC CD**  
CodeMasters brings its excellent CD compilation over to the Amstrad format

**GLEADOW SPEAKS**  
Atari's UK boss speculates on the company's future

# PLUS

- The definitive Shopping Express guide to ST Essentials
- Tech Tips: technical advice with the human touch
- Letters: The best debate outside of Parliament

# WITH

A column for your machine. Expert correspondents on ST, PC, Amiga, C64, Spectrum, Archimedes, BBC, MSX, QL, PCW, XE and CPC

# AND

Six pages of up-to-the-minute news

**STAY AHEAD  
WITH EXPRESS  
EVERY  
THURSDAY**

## MAKE SURE OF YOUR COPY OF NEXT WEEK'S EXPRESS

Hand this form to your newsagent  
to get your copy of *Express* next Thursday

**TO THE NEWSAGENT:** Please deliver to me / reserve for me  
(delete as applicable)  
\_\_\_\_\_ copies of *New Computer Express*

**NAME** .....

**ADDRESS** .....

.....

.....



# ATARI ST and AMIGA

## Sixteen Bit Superdeals from the Sixteen Bit Specialists!

**CUSTOMERS PLEASE NOTE!** When comparing prices remember ours include fast delivery by courier.

**NEW!!**

### 520STE Power Pack

**£359.00**

*Inc. VAT and Next Day Delivery*

**NEW STE**

#### Power Pack includes:

- ★ 520STE 512K Keyboard with Built-in 1 Megabyte disk drive and TV Modulator
- ★ 4096 Colour Palette
- ★ B Channel digital stereo sound
- ★ 4 Joystick Ports
- ★ Over £550 worth of games software, including OutRun, Gauntlet 2, R-Type, Space Harrier, Super HangOn and 16 more Top Games
- ★ Organiser Business Software including WORDPROCESSOR, SPREADSHEET and DATABASE
- ★ First BASIC and First Music Utility Software
- ★ FREE JOYSTICK AND FREE MOUSE MAT WORTH £4.95
- ★ All leads, manuals PLUS MOUSE and free mains plug!

**REMEMBER!** Many ST's do not come with BASIC - ours come with ST BASIC REV D by Metacomco

### 520STE Explorer Pack

**£279.00**

**NEW STE**

- ★ Explorer Pack includes 520STE 512K Keyboard with built-in 1 Megabyte Disk Drive and TV Modulator.
- ★ 1 FREE Game, ST Tutorial and METACOMCO Basic worth £25.00.
- ★ All leads, Manuals PLUS MOUSE and FREE Mains Plug!
- ★ Free mouse mat worth £4.95.

### 1040STE BUSINESS PACK

**£479.00**

- ★ Includes the new 1 megabyte 1040STE keyboard plus FIRST WORD wordprocessing software, SUPERBASE PERSONAL Database Software and NEOCHROME graphics package. Also includes Metacomco BASIC, Mouse Pad, all Leads, Manuals and Mouse.
- ★ 1040STE keyboard without software **£439.00**

### MEGA 1 BUSINESS Pack

**£529.00**

#### Features:

- ★ Separate Keyboard and System Unit
- ★ Inc. all software supplied with 1040 STE Business Pack
- ★ Blitter chip installed for faster graphics
- Inc SM124 Mono Monitor.....£628.00

### ACCESSORIES

Quickshot II Turbo Joystick .....	£9.95	Branded Memorex 3.5" DSDD Disks	
Competition Pro 5000 Joystick .....	£13.95	Box of 10 .....	£13.95
Competition Pro with Autofire .....	£14.95	Memorex Disk Box	
Konix Speedking Joystick.....	£11.95	For 40 3.5" Disks .....	£8.95
Red Mouse Mat with Amiga logo .....	£5.95	Amiga 1/2 Meg Expansion.....	£119.95
Plain blue Mouse Mat .....	£4.95	Control Centre Atari or Amiga .....	£44.95

Contriver Amiga and ST Mouse with FREE Holder and Mouse Pad £20.95

### PRINTERS

Star LC24-10 24Pin incl. lead ST/Amiga .....	£249.00
Star LC10 including interface lead for ST/Amiga.....	£169.00
Star LC10 colour including interface lead for ST/Amiga.....	£219.00
Citizen 120D including interface lead for ST/Amiga .....	£159.00
Citizen 120D including interface lead .....	£139.00
<b>SEIKOSHA 80 COLUMN PRINTERS - AMAZING PRICES</b>	
Seikosha 9 pin NLQ including interface lead for ST/Amiga.....	£139.00
Seikosha 24 pin LQ including interface lead for ST/Amiga .....	£239.00

### AMIGA A500 BAT GAMES PACK

**£399.00**

*Inc. VAT and Next Day Delivery*



#### BAT Games Pack includes:

- ★ Amiga A500 512K Keyboard with Built-in 1 Megabyte disk drive.
- ★ Free TV modulator worth £24.99 allowing you to use the Amiga with a normal TV.
- ★ DELUXE PAINT II GRAPHICS PACKAGE.
- ★ PHOTON PAINT II graphics package with animation worth £70.00.
- ★ FREE, only-just-released BATMAN - THE MOVIE games software.
- ★ NEW ZEALAND STORY arcade games software.
- ★ F16-INTERCEPTOR - amazing 3D flight simulator software.
- ★ A further £230 worth of Games Software, including BUGGY BOY, MERCENARY, BARBARIAN, WIZBALL & six more games.
- ★ FREE JOYSTICK, MOUSE MAT AND 10 BLANK DISKS.
- ★ Amiga BASIC, Amiga EXTRAS 1.3, Workbench 1.3 PLUS the Amiga Step by Step Tutorial.
- ★ All leads, manuals PLUS MOUSE and mains plug!

### AMIGA 1 MEG BAT GAME PACK

**£529.00**



#### 1 Meg Bat Games Pack includes:

- ★ Fitted 1 Megabyte Memory Expansion + Real Time Clock Card
- ★ Everything listed for the A500 Bat Game Pack
- ★ DRAGON'S LAIR 1 MEG MEGAGAME!

### AMIGA A500 CLASS OF THE 1990'S BUSINESS + EDUCATIONAL PACK £549.00

#### FEATURES:

- ★ Amiga A500 + TV Modulator
- ★ Midi Interface + Software
- ★ Kind Words II word processor
- ★ Page Setter DTP
- ★ Super Base Personal Database
- ★ Maxiplan 500 Spreadsheet
- ★ Amiga Logo, BBC Emulator, Deluxe Paint II
- ★ Mouse mat, 10 blank disks and disk wallet

### EXTERNAL DISK DRIVES

Atari SF314 1 Megabyte .....	£139.00
Amiga A1010 1 Megabyte .....	£109.00
Cumana 1 Megabyte Atari or Amiga .....	£89.95
NEC 1 Megabyte Atari or Amiga .....	£79.95
Atari Megafire 30 Hard Disk.....	£439.00
New! Commodore A590 20 meg hard disk.....	£369.00
A590 Hard Disk + Memory Upgrade installed .....	Phone

### MONITORS

Commodore Amiga A1084 stereo Monitor inc lead .....	£269.00
Atari SC1224 Colour Monitor inc lead.....	£259.00
Atari SM124 Mono Monitor including lead.....	£119.00
Philips CM8833 stereo colour monitor inc. lead for ST or Amiga .....	£259.00

### CREDIT CARD ORDERLINE ☎ 0908 378008 (Mon - Sat 9am - 6pm)

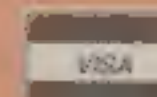
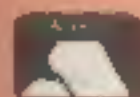
To order either call the orderline above with your Credit Card details OR make a cheque or P.O. payable to: Digicom Computer Services and send it with your order to the address below. Callers are also most welcome at the address below.

### DIGICOM

Unit 36, Wharfside, Fenny Stratford, MILTON KEYNES, MK2 2AZ.

All prices include VAT and delivery by courier  
\* Written details on request APR 34.5% Variable.

**INSTANT  
CREDIT  
NOW  
AVAILABLE**





# DATEL ELECTRONICS

## EXTERNAL 3.5" DISK DRIVE

- ▼ Slimline extra low profile unit - only 6" long!
- ▼ Top quality drive mechanism. Fully compatible.
- ▼ Throughport allows daisy-chaining other drives (Amiga only).
- ▼ A superbly styled case finished in computer colours.
- ▼ 1 meg unformatted capacity.
- ▼ Good length cable for positioning on your desk etc.

AMIGA ONLY **TWIN DISK DRIVE ONLY £129.99**

ADD £5 FOR COURIER DELIVERY IF REQUIRED

## MICRO MIDI



- ▼ A simple low price MIDI interface for the A500.
- ▼ All the features found on more expensive units. Fully compatible.
- ▼ MIDI In - MIDI Out - MIDI Thru.

**ONLY £24.99**

MIDI CABLE - 3 Metre Length

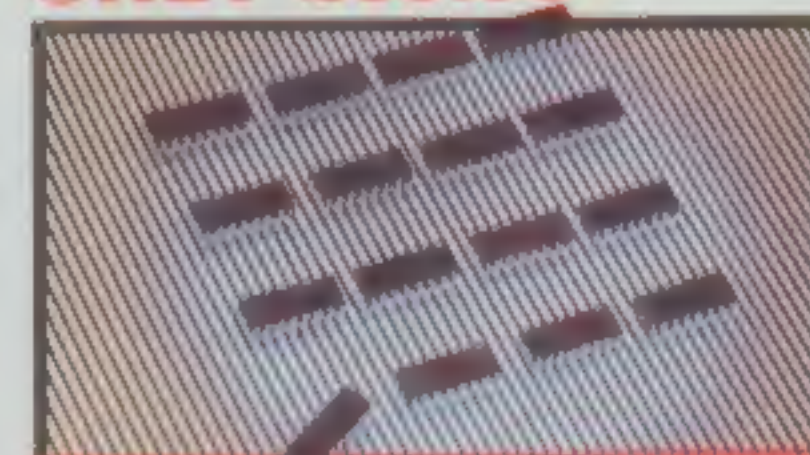
**ONLY £6.99**

## 1MEG INTERNAL DRIVE UPGRADE



- ▼ Replace internal 500K drive with a full 1 meg unit.
- ▼ Top quality drive unit.
- ▼ Full fitting instructions.
- ▼ Easily fitted, no special skills required.
- ▼ When considering a drive replacement remember that quality is most important.

**ONLY £69.99**



## 1 MEG RAM UPGRADE KIT

- ▼ 512K of FASTRAM to bring your 520 STFM up to a full 1040K!!
- ▼ Fitting is a straightforward soldering job - achieved by anyone who has a little experience.

**ONLY £79.99**



UP TO

**£1000**

**CREDIT**

**NO DEPOSIT**

Why not apply for a Datel Charge Card and spread the cost of your purchases. For example, you can spend £240 for only £8 per month OR £480 for only £20 per month

**RING OR WRITE NOW FOR APPLICATION FORM AND FULL WRITTEN DETAILS**

## AMIGA VERSION SINGLE DRIVE

**ONLY £74.99**

ST VERSION

**ONLY £89.99 WITH FREE OCP ART STUDIO**



## REPLACEMENT MOUSE

- ▼ High quality direct replacement for mouse on ST/Amiga.
- ▼ Teflon glides for smoother movement.
- ▼ Rubber coated ball for minimum slipp.
- ▼ Optical system counting - 500/mm.

**SPECIAL OFFER - FREE MOUSE MAT + MOUSE HOUSE (WORTH £7.99).**

**ONLY £29.99**

COMPLETE (STATE ST OR AMIGA)



## 512K MEMORY EXPANSION

- ▼ Now with this superb 512K expansion unit you can simply plug in more memory. Bring your Amiga up to 1Meg Ram in seconds!!
- ▼ Buy direct from the manufacturer and save!

**ONLY £84.99 COMPLETE**

**ONLY £99.99 FOR VERSION WITH CLOCK/CALENDAR COMPLETE**



## 512K RAM EXTENSION CARD

- ▼ Available with/without calendar/clock option.
- ▼ Simply plugs internally into A500 slot.
- ▼ Switch in/out with switch supplied.
- ▼ Fitted in minutes - no soldering etc.
- ▼ Accepts 41256 DRams (zero K RAM fitted).
- ▼ Battery backed to retain time/date.

**ONLY £19.99**

**ONLY £34.99 FOR VERSION WITH CLOCK/CALENDAR**

NB THESE PRICES DO NOT INCLUDE RAM CHIPS.



## GENISCAN GS4500 ST/AMIGA



- ▼ An easy to handle Handy Scanner featuring 105 mm scanning width & 400 dpi resolution enables you to reproduce graphics & text on your computer screen.

- ▼ Adjustable switches for brightness & contrast.
- ▼ Printout for Epson compatibles.

- ▼ With Geniscan you have the ability to easily scan images, text & graphics into the ST/AMIGA.

- ▼ A powerful partner for Desk Top Publishing.

- ▼ Powerful software allows for cut & paste editing of images etc.
- ▼ Save images in suitable format for most leading packages including DEGAS, NEOCHROME, FLEET-STREET, DELUXE PAINT, PHOTON PAINT, etc.

- ▼ Unmatched range of edit/capture facilities not offered by other scanners at this price.

## SPECIAL OFFER

COMPLETE WITH PHOTON PAINT

**FOR ONLY £169.99**

INCLUDING HARDWARE/SOFTWARE



ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

## HOW TO ORDER ...

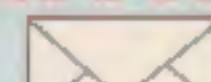
### BY PHONE



**0782 744707**

24hr Credit Card Line

### BY POST



Send cheques/POs made payable to "Datel Electronics"

### FAX

**0782 744292**

UK ORDERS POST FREE  
EUROPE ADD £1  
OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

CALLERS WELCOME - Please reserve goods by telephone prior to visit.

# DATEL ELECTRONICS

DATEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE  
GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY  
**0782 744707**

TECHNICAL ONLY  
**0782 744324**